



County Borough of Smethwick.

The
Health of the Borough
in
1930.

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Medical Officer of Health,
Tuberculosis Officer, School Medical Officer
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Hospital and Sanatorium.

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County Borough of Smethwick.

Committees—1929-1930.

Health Committee.

Chairman: ALDERMAN MRS. E. M. SANDS, J.P.

ALDERMAN E. T. BROWN.

COUNCILLOR E. GWYNNE.

ALDERMAN A. MORRIS, J.P.

COUNCILLOR T.C. MCKENZIE, M.B.

COUNCILLOR R. T. BAILLIE, M.B. COUNCILLOR F. W. PERRY.

Maternity and Child Welfare Committee.

The Members of the Health Committee together with the following Co-opted Members :—

MRS. E. T. BROWN.

MRS. G. HARBIDGE.

MRS. S. LUSTY.

MRS. R. WOODWARD.

Smethwick and Oldbury Joint Hospital Committee.

Chairman: COUNCILLOR W. J. COOPER.

ALDERMAN A. MORRIS, J.P.

COUNCILLOR T. FRALEY.

ALDERMAN MRS. E. M. SANDS, J.P. COUNCILLOR E. GWYNNE.

ALDERMAN E. T. BROWN.

COUNCILLOR MRS. A. B. LENNARD.

COUNCILLOR T. C. MCKENZIE, M.B.

Oldbury Representatives :

COUNCILLOR MRS. GROWCOTT.

COUNCILLOR H. H. ROBBINS, J.P.

COUNCILLOR R. M. HADLEY, J.P.

Smethwick Representatives on the South Staffordshire Joint Small Pox Hospital Board.

ALDERMAN G. F. BETTS, J.P.

ALDERMAN MRS. E. M. SANDS, J.P.

COUNCILLOR H. TRINDER.

Health Department Staff.

Medical Officer of Health, Tuberculosis Officer, School Medical Officer, and Medical Superintendent of Isolation Hospital :

HUGH PAUL, M.D., B.Ch., B.A.O., D.P.H.

Senior Assistant Medical Officer :

CHARLES COOKSON, M.D., Ch.B., D.P.H.

Assistant Medical Officers :

MARGARET E. McLAREN, M.B., Ch.B., D.P.H.

EDITH M. AINSCOW, M.B., Ch.B., D.P.H.

EILEEN C. TRIMBLE, M.B., Ch.B. (part-time).

MARGARET GALBRAITH, M.B., Ch.B. (part-time), from 24 June, 1930.

District Medical Officer and Public Vaccinator :

JAMES SHAW, M.B., Ch.B.

Vaccination Officer : F. E. CADBY.*Chief Sanitary Inspector.*

†*JOHN H. WRIGHT.

Sanitary Inspectors :

†*JAMES F. ROGERS (until 2nd May, 1930).

†*WM. E. SHAW.

†*H. A. RICHARDSON.

†*WM. E. COLSTON (from 3rd June, 1930).

*Clerical Staff.**Chief Clerk and Statistician :* *GEORGE H. ROE.*Clerks :* MISS IDA SALTER.

MISS F. HOWLETT.

A. H. CORNHILL (until 28th May, 1930).

S. SADLER.

J. P. LITTLE (from 1st March, 1930).

F. CADDICK (from 11th July, 1930).

Junior Clerk : E. BAYLEY.*Nursing Staff :*

MISS L. E. ROBERTS.

§*MISS F. RICHARDS.

§ MISS E. COLLINS.

§†MISS M. EVANS.

§†MISS A. GARNER.

§ MISS H. OWEN.

§ MISS A. WRIGHT.

§ MISS F. M. SULLIVAN.

§†MISS J. E. ACKERS.

§†MISS G. W. HAYNES.

§ MISS C. M. BULLOCK.

§ MISS J. P. BATES.

The work of these nurses is divided between the following Committees:—Health, Maternity and Child Welfare, Tuberculosis, Education and Mental Deficiency.

Matron of Isolation Hospital : MISS F. E. WHITEHOUSE.*Public Analyst :* JOSEPH LONES, F.I.C., F.C.S.

*Sanitary Inspectors' Certificate of Royal Sanitary Institute.

†Meat and Foods Inspectors' Certificate of Royal Sanitary Institute.

‡Health Visitors' Certificate of Royal Sanitary Institute.

§Certificate of the Central Midwives Board.

County Borough of Smethwick.

Public Health Department,
 "The Uplands,"
 Hales Lane,
 Smethwick.
 June, 1931.

To the MAYOR, ALDERMEN and COUNCILLORS for the
 County Borough of Smethwick.

MR. MAYOR, LADIES AND GENTLEMEN,

I beg to submit my Annual Report as Medical Officer of Health and Tuberculosis Officer for the year 1930.

POOR LAW PROVISION.

The Local Government Act of 1929, which came into force on April 1st, 1930, has brought to Smethwick a heritage of difficulties which will take several years to solve. The intention of the framers of the Act was to unify and simplify local government and its areas, but the effect in this borough has been the reverse inasmuch as Smethwick has been for Poor Law purposes a constituent part of the Birmingham Union, and its severance from that Union last April has left it in a most unfortunate position.

The present situation in Smethwick is that there are no institutions whatever under the control of the Council, even the Isolation Hospital being controlled by a Joint Committee. At Romsley Hill Sanatorium where the Council have twenty beds for early cases of Pulmonary Tuberculosis the Institution is controlled by the Birmingham Council, but Smethwick is represented on the Committee managing the institution by two members of the Council. In the case of the insane, most of whom are at Burntwood, the Council is represented on the Staffordshire Mental Hospitals Board by three members. As regards Mental Deficiency, the majority of Smethwick patients are at Monyhull Colony, which was controlled by the Birmingham Guardians and is now an institution appropriated under the Act of 1929. A certain number of low grade mentally defectives are at Erdington, which is controlled by the Birmingham Public Assistance Committee, a small number at Ross Infirmary, and an increasing number (now about twenty) at Great Barr Park Colony.

Great Barr Park Colony is an up-to-date institution which has been erected mainly within the past few years, and which is capable of considerable extension. It was controlled by the late West Bromwich

and Walsall Unions, and is now under the direction of the Councils of the two County Boroughs. Smethwick has some slight interest in the institution, as Warley Ward was part of the late West Bromwich Union. The question of the future control of the Colony is still under consideration, and at present the majority of the patients being sent to it are from Walsall, West Bromwich, Wolverhampton and Smethwick.

Maternity cases are sent now (as they have been for some years past) to Dudley Road and Selly Oak Hospitals, and the cost of their upkeep is borne by the Maternity and Child Welfare Committee. This arrangement, although limited in its scope, continues to work satisfactorily. An increasing number of women are being confined in maternity wards, and it is believed that there will be no difficulty in filling the Municipal Maternity Hospital when it is erected—I hope at an early date.

The ordinary acute medical and acute surgical cases, chronic cases of all kinds, senile dement, etc., are by arrangement being treated for two years from April 1st, 1930, in the Birmingham Institutions which were formerly administered by the Birmingham Board of Guardians, and which have now come under the management of the Birmingham Health Committee. Smethwick Council has no representation on this Committee.

Various other classes of our patients are treated at the Birmingham Voluntary Hospitals. These comprise patients suffering from Venereal Diseases who are treated at the General Hospital Clinic by arrangement with the Health Committee, which pays for Smethwick patients in proportion to their attendances; enlarged tonsils and adenoids, eye, ear, throat and skin diseases and orthopaedic cases.

ORTHOPAEDIC DEFECTS.

The present arrangements work smoothly and efficiently and might well be extended. The Cripples' Union deals with these patients and an orthopaedic surgeon attends regularly at their out-patient clinic. At present the Council pays for the inpatient treatment of tuberculosis cases, which is given mainly at the Woodlands and Forelands, and the Royal Cripples' Hospital, Birmingham, all of which come within the scope of the Birmingham Hospitals Contributory Scheme. The facilities and number of beds available seem to be adequate.

MATERNITY HOSPITAL.

The Council propose to erect a Maternity Hospital containing 24 beds on the Firs Estate, and plans have been submitted to the Ministry of Health. When this is erected it will provide for all maternity cases except puerperal fever. As regards the latter, the present situation is that they are sent to the Women's Hospital, Sparkhill, under an agreement by which the Council pay the latter £100 per annum. The plans for the Maternity Hospital are well advanced and several interviews have taken place between your officers and the officers of the Ministry of Health, and it is hoped that building will commence at an early date. The Maternity and Child Welfare Committee have not yet considered the question of staffing this Hospital, but accommodation is being provided for a resident woman medical officer.

The Maternity Hospital will presumably be available to all classes and a charge should be made in accordance with the patient's financial circumstances. The Maternity and Child Welfare Committee have a scale in force for patients sent to the Maternity Block in Dudley Road Hospital. No discrimination should be made between married and single women, but it must be recognised that there are some pregnant single women who wish to have their babies in an institution as far away from home as possible in order to avoid publicity. They would be unwilling to go to a local Maternity Hospital where their condition might be noticed by their neighbours, but would not object going to an institution (such as Hope Lodge in Birmingham which takes only unmarried women). I would suggest that no unmarried mother should be debarred from entering the Municipal Maternity Hospital because of being unmarried, but that on the other hand, no such mother who needs institutional treatment should be forced to go in if she is unwilling, but should be given the opportunity of going to Hope Lodge or some such special institution if she so desire.

GENERAL HOSPITAL PROVISION.

The three courses which your Council has been considering with regard to general hospital provision are:—

- (a) To continue the present arrangements, and come to a permanent agreement with Birmingham to take our hospital patients as in the past, with or without representation on the Birmingham Health Committee.
- (b) To send our patients to West Bromwich Municipal Hospital (Hallam Hospital) either as unrepresented customers, or as partner on a Joint Board. This would necessitate a fairly large building programme, as Hallam Hospital would require to be extended to the extent of about 150 beds to accommodate all Smethwick patients. The advantages and disadvantages of this course have been fully considered by the Council, and I need not discuss them here.
- (c) The erection of institutions by Smethwick for Smethwick patients. This course has also been fully considered by your Council and is the one which is the most acceptable at present. It is the only way in which the Council can have under its own control the service of the standard it desires, and an institution built and equipped under the Public Health Acts, and free from all Poor Law associations.

The population of Smethwick is not very large for providing such accommodation, but I am convinced that it would be the most economical in the long run. The cost of administering a series of institutions built to a definite co-ordinated scheme will be less than that of administering a series of *ad hoc* buildings, built at different times, and each without reference to co-operation with the others. The administrative and clerical staffs also would be the same for all buildings, and considerable saving would be effected by the flexibility of the scheme, and the fact that in emergency either officers or patients could be rapidly moved from

one section to another. Flexibility is very necessary in matters of hospital administration owing to the unequal demand at various seasons of the year, and to the impossibility of forecasting with any degree of accuracy the requirements at any future date. The Central Office (Health Department) can always see what exactly is the position at each institution and can work accordingly.

INFECTIOUS DISEASE HOSPITAL PROVISION.

At present only cases of Scarlet Fever, Diphtheria and Tuberculosis are taken into Holly Lane Institution, as there is no accommodation for any other diseases. In a report last year to the Council, I suggested that if advanced cases of tuberculosis were removed from Holly Lane, there would be available space for extension to accommodate other infectious diseases, notably measles, whooping cough, erysipelas, and in epidemic times pneumonia and influenza. In the past, all these diseases have been treated at home or in one of the Birmingham Hospitals (Dudley Road and Selly Oak), but it has always been difficult to get such patient any institutional treatment at all. As from the 1st April these cases come more directly under the Council and may be dealt with either under the Public Health Acts or under the Poor Law Acts. I assume the Council would prefer to deal with them under the Public Health Acts.

For many years past it has been increasingly obvious that measles is a much more dangerous and deadly disease than scarlet fever, and that institutional treatment for it is urgently needed. Indeed within the past few years several local authorities have discontinued treating scarlet fever in hospitals and are taking in measles instead. The following table will serve to show the relative importance of the two diseases mentioned and, in addition, diphtheria and whooping cough:—

Deaths in Smethwick during the past five years:—

	Measles.	Whooping Cough.	Diphtheria.	Scarlet Fever.
1926	4	6	9	1
1927	20	10	3	1
1928	2	10	2	0
1929	25	17	2	0
1930	2	1	21	2
	—	—	—	—
	53	44	37	4
	—	—	—	—

It will thus be seen that measles and whooping cough, which are not usually treated in institutions, were responsible for 53 and 44 deaths respectively as against 4 for scarlet fever during the past five years. It appears to me that the only cases of scarlet fever which should be taken into Hospitals are (a) severe cases and (b) cases in which proper isolation cannot be secured at home, and in which there are young children in the family, or where one or other of the inmates works in a food shop, grocery, laundry, etc., where the disease might easily be spread. Diphtheria, on the other hand, should always be treated in hospital owing to the powerfully selective action of the toxin of the disease on the heart.

As regards measles, this disease is most infectious during the first day or two, and those exposed to infection are usually infected before the rash is out or the disease diagnosed. Hospital provision, therefore, will do little or nothing to reduce the actual incidence of the disease, and at present mild cases should not be sent to hospital unless there are other circumstances which render this desirable. Such circumstances would be bad home conditions, lack of nursing facilities or food, careless parents, or debility of the patient. Severe cases, however, should be sent to Hospital because of the danger of death from complications—a danger that is by no means remote. I am convinced that many of these 53 deaths could have been prevented by Hospital treatment. At present there is no provision at all for such cases, and if, to take an extreme but not rare example, a father were to make application to have his child removed on the grounds that she had severe measles, that the mother was ill or dead, that he was working, and there was no one to look after the child, it might be necessary to tell him that there was no provision for such a case, in spite of the fact that we are required under the Poor Law Acts to provide for all the destitute sick. In actual practice, we would probably succeed in getting a neighbouring authority (e.g. Birmingham) to take such a case into their Infectious Diseases Hospital for us as a matter of courtesy.

Whooping Cough comes into the same category as measles, and the above remarks apply equally to this disease.

The other infectious diseases, such as typhoid fever, mumps, cerebro-spinal fever, erysipelas and infantile paralysis are not common and would seldom require more than two or three beds at any one time.

Influenza and pneumonia are in a category of their own. Uncomplicated influenza could generally be treated at home and influenzal pneumonia could be treated either in the Infectious Diseases Hospital or in a General Hospital. In epidemic times probably both types of institutions would take in such cases.

The extension of the Smethwick and Oldbury Joint Hospital is being considered by the Hospital Committee and plans have been submitted to them for approval. It is expected that actual building will commence during the next few months.

MUNICIPAL HOSPITAL.

The estimate of the number of beds which would be required for general hospital cases if Smethwick were to provide its own accommodation is rendered difficult by the fact that we are dealing with several unknown factors, chief of which are the following:—

(a) The extent to which the removal of the treatment of the sick from the Poor Law Guardians to the Municipality will stimulate the demand for hospital accommodation. It is undoubtedly true that during the last few years the standard of the Poor Law Hospital has materially improved, but there is still a certain section of the community, small may be in number, who would be unwilling to enter a Poor Law Hospital, but who would willingly go into a Municipal Hospital. Few patients object to go into the Infectious Diseases Hospital which is a Municipal

Hospital and I have never heard of a refusal to enter on the grounds that it was a Municipal Hospital. We may, therefore, expect that the removal of the stigma of the Poor Law will operate to increase slightly the demand for beds, especially on the chronic side.

(b) The extent to which Smethwick patients will continue to avail themselves of the facilities offered by the Birmingham Voluntary Hospitals. The erection of a Municipal Hospital for Smethwick would probably reduce the attendances at the Birmingham Hospitals slightly. It is to be hoped that the Smethwick residents will continue to avail themselves of the facilities at the Birmingham Voluntary Hospitals to whose erection and upkeep they have paid their quota in the past and to which they continue to subscribe generously, but the fact that there would be less time wasted in waiting for out-patient treatment, and that the waiting list for beds would be smaller would probably make the Smethwick Hospital more popular. Smethwick residents would probably also feel that they have more right to attend their own Hospital, which is kept up by the rates they pay.

(c) The extent to which a Municipal Hospital, built in Smethwick, would increase the demand for in-patient treatment.

(d) Increasing hospitalisation throughout the country. Owing largely to the increased complexity of modern industrial and economic conditions and to the increased efficiency of modern hospitals, institutional treatment is more popular than in the past and the demand for more beds is increasing. Further, many conditions which were not considered worth undergoing treatment for in the past (especially operative treatment) are now constantly being treated owing to an increase in the efficacy and safeness of modern methods, and our present ideals of prevention rather than cure is bringing into the hospitals for preventive treatment, cases which in past years would have been ignored. In this connection it might be stated that at the present time in most industrial areas, owing to shortage of beds, there is great difficulty in securing the admission of sub-acute cases, both medical and surgical, and of cases likely to require prolonged treatment. Cases of hernia (rupture) haemorrhoids (piles) and gynaecological conditions have often long to wait, and their disablement involves both suffering and economic loss. In the case of many of the sub-acute conditions in women, this delay may cause permanent ill-health.

(e) As classification can best be carried out in a large hospital, the number of beds required would be greater than if we had continued to use Dudley Road, Selly Oak and Erdington.

I estimate that the number of beds required for general cases in Smethwick would be approximately :—

Acute medical and surgical cases	...	120 beds
Children	... ..	50 beds
Chronic cases	... ..	80 beds
Early mental cases	... ..	14 beds
Observation	... ..	6 beds

Total 270 beds

These figures do not include provision for healthy adults or children, who will continue to be chargeable to the Public Assistance Committee, nor do they include maternity cases.

If a Municipal Hospital were built under Section 131 of the Public Health Act of 1875, the Council would be in a position, if they thought fit, to make a "Declaration" under Section 5 (1) of the Local Government Act of 1929. Under this Section the Council may declare, as soon as circumstances permit, that all assistance which can lawfully be provided otherwise than by way of poor relief shall be so provided. On the erection of the Municipal Hospital, the Council would be in a position to declare that the treatment of the sick would be provided under the Public Health Act, 1875, and not under the Poor Law Acts as at present.

In fact, should this course be adopted by the Council, all the present Poor Law Medical Work, except the work of the District Medical Officer could be provided under the Public Health Act, and the stigma of Poor Law entirely removed. Under Section 6 (2) of the Local Government Act, 1929, the work of the District Medical Officer could be transferred to the Public Health Committee, and if this were done all the medical work of the Council, except the School Medical Service, would come under the one Committee. This would prove of considerable administrative value, and tend to make the scheme more easily worked.

DIPHTHERIA.

One of the outstanding features of the year was the unfortunate epidemic of diphtheria which broke out in the Autumn and Winter and continued until the end of March of 1931. Not only was the number of cases greatly increased but the severity of the disease was also abnormal, and there were 28 deaths (including the deaths in the first three months of 1931). The epidemic started in Sandwell Ward and was mainly confined to this Ward throughout, the other parts of the town having about the normal number of cases. All possible steps were taken to deal with the outbreak, and to prevent recurrence, large numbers of children were protected against future attacks by toxoid-antitoxin inoculation. The proportion of parents in the Sandwell Ward who accepted our offer to protect their children by immunisation was fairly high, but in other Wards the fact that there were few actual cases of diphtheria in the neighbourhood made the parents apathetic, and although vigorous attempts were made to press the campaign, the percentage of acceptances was small. The epidemic is dealt with fully in the body of the report.

TUBERCLE BACILLI AND MILK.

During the year a number of samples of milk were tested for the presence of tubercle bacilli and the results of a series of 60 examinations were so alarming that the experiment was continued on a larger scale and, indeed, is still proceeding. The results are set out in very full detail in the Chief Sanitary Inspector's section of this Report, but in view of the importance of the subject, and of the interest which the public have been taking in the question of pure milk supplies, I make no apology for discussing the matter further in this Introduction.

From October, 1930, to the end of April, 1931, 203 samples of milk were taken and sent to the Birmingham University Public Health Laboratory for examination for the presence of tubercle bacilli. The tests for tubercle were biological and the animals used were guinea pigs, Professor Lewis being responsible for the examinations. Of these 203 samples of milk no less than 25 (or 12.3%) contained living tubercle bacilli; but what is of even greater importance is the fact that of 35 samples of pasteurised milk, no less than 8 (or 22.9%) contained living tubercle bacilli after pasteurisation.

I would suggest that the importance of the above results of our investigations can hardly be over-estimated, indicating as they do an alarming state of affairs. They show that tubercle infected milk is being sold in Smethwick on a wide scale and that the commercial pasteurisation of this milk has failed to render it safe. It is a well known fact that a large proportion of the cases of surgical tuberculosis, particularly in children, are caused by tubercle infected milk, and it is estimated by Sir George Newman in the Ministry of Health pamphlet recently issued on Bovine Tuberculosis that at least 1,000 children in this country die every year as the result of tuberculosis caused by the ingestion of infected milk. In addition to these deaths a very much larger number of children are crippled and rendered unfit to take their place in society as self-supporting citizens. The danger, therefore, arising from the state of affairs exposed by our investigations is extremely serious. The danger to the community of this contaminated milk is intensified by the fact that it is usually mixed with other non-infected milk and the infection is spread over a large area. Further, as the tests for tubercle are biological, it takes three or four weeks before a positive result can be received and a further week or two before the infected animals can be traced back to the farms and segregated and slaughtered.

PASTEURISATION.

Pasteurisation is a term to which unfortunately more than one definition may be given. The Ministry of Health insists for its Graded Pasteurised milks that the milk shall be raised to a temperature of 145-150°F., retained at that temperature for 30 minutes and then rapidly cooled. This method of pasteurisation is called the Holder process. Unfortunately in this country a large number of farmers treat their milk by a method which they allude to as pasteurising and which consists of raising the temperature of the milk rapidly to boiling point and then cooling. This is known as the flash process. It is ineffective, interferes with the physical, chemical and nutritive properties of the milk and its chief value to the retailer lies in the fact that it enables a dirty milk to keep from going sour for a fairly long period. In Smethwick and indeed in the Midlands as far as we are aware the Flash method of pasteurising is not practised, and all the plants used by Smethwick firms are modern and up-to-date and efficient plants capable of effective pasteurisation. Our investigations, however, have shown that while the plant is not at fault the carrying out of the pasteurisation is faulty and in no less than 22.9 per cent of pasteurised milks the bacilli have persisted after pasteurisation. The remaining 77.1 per cent of samples we have no means of judging whether pasteurisation was efficient or not as it is possible, and we would hope probable, that none of them contained

tubercle bacilli before pasteurisation. The fault lies in the human factor. The plants are satisfactory but due to carelessness the requisite temperature is not maintained or is allowed to drop during the pasteurising period. We are satisfied that efficient pasteurisation of milk by the Holder process, raising the temperature of the milk to at least 145°F., actually does kill tubercle bacilli and renders infected milk safe. It is fully evident, however, that a lower temperature will fail and it is equally evident that lower temperatures have been used in the pasteurisation of milk in this case.

REMEDIES.

The Ministry of Health have graded various types of milk and the following are their categories:—

- (1) Certified Milk. The highest standard. This milk besides being of a high degree of purity and cleanliness can be guaranteed free from tubercle bacilli.
- (2) Grade A (T.T.). This milk, while the same standard of cleanliness is not insisted on, can also be guaranteed free from tubercle infection.
- (3) Grade A Pasteurised.
- (4) Grade A Unpasteurised. This milk is considered by many of the public to be the highest grade of milk obtainable, whereas actually it is the fourth and is almost as liable to contain tubercle bacilli as a non-graded milk. It is allowed to contain up to 200,000 bacilli per c.c. but a milk containing anything approaching this amount of contamination should in my opinion be classed as a dirty milk. The herds have to be examined by veterinary inspectors every three months but as the tuberculin test is not applied this examination is of little value in the prevention of tubercle infection.
- (5) Pasteurised Milk.

The obvious remedy for this state of affairs as disclosed by our investigations would be to insist that all milk sold should be of the first two grades: Certified or Grade A (T.T.). Unfortunately, however, this is not practicable, as the amount of milk of these grades being produced in this country at present is extremely small and cannot be increased by any known method sufficiently to supply the entire country for at least several years. While, however, the ultimate solution of the problem should be such as to ensure that in a certain number of years every herd in this country shall be tubercle free, some palliative measure must be taken to bridge over the gap until all raw milk can be guaranteed free from infection and the only possible palliatives are sterilisation by boiling or *efficient* pasteurisation. Sterilisation is a counsel of despair as boiling undoubtedly alters the character of the milk completely. Pasteurisation, therefore, efficiently and scientifically controlled remains the only satisfactory method of dealing with the situation at present.

How are we, however, to obtain efficient pasteurisation? Our experiences in this district show that the provision of an efficient plant is not sufficient as all the local pasteurising depots already possess modern up-to-date plants. It is the human factor which is faulty. The error in the human factor might be eliminated by a system of automatically controlled thermographs. These thermographs would not only

register the temperature of 145° to 150°F. automatically, but would also control the heating of the milk so that this temperature would be automatically maintained. Unfortunately, however, the experience of large pasteurising firms is that there is not at present on the market an efficient thermograph apparatus. Could, however, one be devised it would be of immense value in the elimination of tubercle infection from infected milk. The only other method of control which we can at present make use of in this connection is the repeated examination of milk for the presence of tubercle bacilli and the following up of each infected sample to its source, and the constant supervision of the working of pasteurising plants in the district. It must, however, be realised that an officer of this Department is unlikely to find a firm pasteurising its milk ineffectively as the very presence of such an officer would mean that while he is present the apparatus would be carefully supervised. It is true that the Council has the power of revoking a licence of a pasteurising firm for inefficient pasteurisation but the only course open to a firm which has its licence revoked is to sell raw milk and the final result would not be that the public derived more benefit.

The above measures are merely palliative and the matter of the improvement of the milk supply of this country is an urgent one which in spite of the fact that it is not easy should not be indefinitely delayed. Undoubtedly at the present time there are sufficient tubercle-free herds in the country to supply only a small proportion of the milk demand. On the other hand there is no reason why measures should not be taken now which will, say in 10 years, have eliminated infected animals from all the herds in this country. It requires first of all a more highly educated public opinion and in the second place legislation to make compulsory the measures which are necessary for eliminating infected animals. A suggestion has been made by Dr. Savage, Medical Officer of Health to Somersetshire, that legislation should be passed enabling local authorities to prohibit in their area the sale of any but specified grades of milk. This would enable Smethwick for instance to make bye-laws prohibiting the sale of any but Certified, Grade A (T.T.) or Pasteurised Milk. With a bye-law of this nature firms which pasteurised their milk inefficiently could have their licence revoked and they could not then sell the same infected milk as raw milk.

Every facility which the State could afford should be given to the owners of tubercle-free herds to keep their herds free from infection including free veterinary inspection and free tuberculin testing. For the stamping out of infected animals throughout the country we would suggest that municipal veterinary inspectors should be appointed all over the country and the compulsory examination of the herds, including tuberculin testing by the double intradermal test, should be instituted so that by these measures the infected animals could be gradually weeded out and the herds eventually freed entirely from infection. Measures of this nature are at present being carried out in Canada, in Denmark and in other progressive countries: such measures are overdue in this country. Legislation of this nature might at first be adoptive but later compulsory on all local authorities.

The total cost of the veterinary services required would, we feel sure, be more than offset by the saving of money now spent on the hospital and sanatorium treatment of thousands of cases of surgical tuberculosis yearly.

TUBERCULOSIS.

The figures given in the body of this report indicate that non-pulmonary tuberculosis has declined very rapidly during the past 25 years, and is now causing only one quarter as many deaths as in 1902. Pulmonary tuberculosis is not declining to anything like the same extent but the deaths for the past five years have been about 20 per cent. lower than for the five years immediately succeeding the Great War.

It is universally recognised that early diagnosis of Tuberculosis is necessary for its successful treatment, and in the absence of any one cure for this disease, Sanatorium treatment with proper care and supervision following, is still the best and wisest method; but the problem is complex, because not all cases, even if diagnosed at the earliest possible moment and accorded the most thorough and proper treatment, would recover or even improve. There is a type of case often re-occurring in one family, where the "soil" is unaccountably poor, and there is no resistance to the onset or progress of the disease, even though the persons themselves are physically strong and apparently well-built. Sanatorium treatment only temporarily benefits these patients. Still in spite of this medical reason an early diagnosis, followed by efficient Sanatorium treatment is the best start for a good result.

THE VALUE OF SANATORIUM AND HOSPITAL TREATMENT.

The main advantages gained from such treatment are:—

1. The material benefit to the patient accruing from a life in the open, under expert care, with medical advice as to the amount of exercise and rest to be taken, treatment of troublesome symptoms, the provision of the right kind of food served regularly, etc.
2. The lessons taught to the patient of regularity, cleanliness, care of sputum and thoughts of prevention of infection of others, necessity for exercise wisely chosen, importance of rest, fresh air, and many other points which though known to all have never been emphasised before.
3. The removal, for a time at any rate, of an infective person from his surroundings, and thus the (temporary) removal of a source of danger. With this there is also the relief given to many families from nursing an invalid. Even where the case is an early one, a great deal of special effort and preparation has to be made by the rest of the family, and the patient cannot help in this, seeing that an essential part of his treatment is rest, and life in the open air. Too often one hears of a wife or husband who has continued to work and at the same time nursed the other until he or she is "ready to drop"; this is obviously unwise and uneconomic, both for the patient and for the other partner. However willing the remainder of the family may be to look after the patient, the latter inevitably becomes a severe drag on the health and material comfort of the others, especially when the family includes young children, and this is all too frequent with a disease that attacks especially young adults. The stay of a patient

in a Sanatorium for at least a month or two, besides improving his health, gives his family a chance to have a rest, improve their health, and prepare for his return.

It should be mentioned here that especially with bed patients much more can be done in Institutions staffed by experts on their work than at any home, even with all the goodwill in the world.

THE AIMS OF SANATORIUM AND HOSPITAL TREATMENT.

In any scheme for the Institutional treatment of Tuberculosis patients, provision should be made for:—

1. The treatment of early cases with a view to curing them, i.e., rendering the disease quiescent at first so that the damaged portion of lung may later heal completely.

2. The treatment of intermediate cases with a view to curing them, if possible; but at least with a view to arresting the activity of the disease and permitting the patient so far to recover his general condition that he can keep going from year to year with frequent short periods of such treatment.

3. The care of advanced cases with whatever treatment is required so that they can be made as comfortable as possible, and being removed from their old surroundings, that they may be no source of danger to others. These cases are best treated on Hospital lines with as much open-air treatment as wards with balconies will permit.

4. The observation of doubtful cases. At the present time the usual practice is to admit suspected cases not for treatment but for observation only, and to limit the stay in an Institution to two months, or three months as a maximum. In certain cases it would be advantageous to admit suspects for fairly lengthy periods of preventive treatment, when the bodily resistance could be built up and the onset of actual disease prevented. Until the Local Government Act of 1929 was passed, it was impossible for the Local Authority to provide any Institutional treatment for such cases, and it is doubtful if the Ministry of Health would look with favour on the practice of admitting them to a Sanatorium where positive cases were treated. In any scheme for the provision of General Hospital accommodation in the future, the claim of these cases should not be lost sight of.

SOME DIFFICULTIES ASSOCIATED WITH SANATORIUM TREATMENT.

Apart first of all from the actual cost of building and upkeep of a suitable Sanatorium with beds for all needs, and apart from the difficulty of *treating* suspected cases (those not definitely diagnosed), other difficulties arise, particularly from the patient's point of view.

1.—Tuberculosis is peculiarly a disease which tends to reduce not only the sufferer, but his whole family to the poverty line, especially where the breadwinner or the mother of the family is affected, and a vicious circle is rapidly established of a man and woman needing extra

care, food and help in the household, when actually the bare necessities of life become more and more difficult to obtain. Even the present generous grants of Out Door Relief are only sufficient to keep a healthy family in essentials, especially when there are young children; but where a mother in addition to her ordinary work has to look after a sick husband who needs extra nourishment and clothing, and whose very presence in the house all day, adds to her work, demanding where possible extra help to assist her; or similarly when the mother is affected, or even where a grown-up son or daughter is affected, though perhaps not so acutely here, then the position is desperate. It is because of this that so many men and women affected with Tuberculosis return to work saying they feel fit for work; after a wholly inadequate rest, and often leave Sanatorium long before the Medical Superintendent would advise them to leave, simply because the position at home has become so straightened. For the same reason many patients put off going to their doctor for too long, wilfully deceiving themselves that they have only got a bad cold, and will "work it off." Those patients do not give themselves a chance.

It is not meant, of course, that these and subsequent remarks apply to all Tuberculosis patients, but each of the difficulties enumerated is met with all too often.

Of the 400 Pulmonary cases on the Dispensary Register 35 refused Sanatorium treatment altogether when advised, and 37 having been to a Sanatorium at one time have refused at another time. There are 291 out of the 400 who have had sanatorium treatment and of these, 99 left Sanatorium before they were medically advised to do so.

There are more reasons than one, of course, why patients refuse to go to Sanatorium or to stay their proper time, but it is interesting to note that of 326 patients recommended what must be considered the safest measures for their health, 72 refuse at one time or another, and 99 out of 291 do not stay long enough to benefit as they should. That is, about half the number recommended for Sanatorium are unwilling to go in at all or alternatively to stay in long enough to derive full benefit. These figures are under-estimated rather than over-estimated.

2. Another difficulty akin to the first one is that patients will refuse Sanatorium treatment, or not stay as long as desired, for fear of losing their job. This applies especially to the less skilled workers whose places in industry can easily be replaced, particularly when work is slack, e.g., general labourers, girls supervising the working of automatic machines, or the men managing small businesses of their own, e.g., boot repairing, when on return from a Sanatorium they find all their customers gone. It applies much less to the highly skilled workers whose employers are usually willing to take them back on their return.

3. It is often very difficult to persuade mothers having young children to go to a Sanatorium, even though it would often be to the advantage of both,

4. Objection is sometimes raised that the patient has not got the change of clothing, under-clothing, sleeping garments, etc., needed at a Sanatorium. This objection is met in Smethwick by referring such patients to the Secretary of the Mayor's Fund, when they receive very generous assistance. Unfortunately this Fund has not got a limitless purse and cannot do everything it would like to do, for that reason.

5. In a heavily populated industrial area like Smethwick, houses are found in many undesirable situations, some close up to Works of all kinds, others grouped together in most unhealthy proximity; added to these disadvantages they are often badly overcrowded, and it is to these houses that many patients return from Sanatoria where they have been taught the ideals of fresh air, space, quietness, cleanliness, and so on, and where the good derived from the stay of months in the Sanatorium, is lost in so many weeks. It might be added here that we gratefully acknowledge the very sympathetic hearing we have always had from the Housing Committee in our recommendations of certain Tuberculosis patients for more suitable homes, for the sake of the patients and their families. But while no Housing Committee could have done more in Smethwick than has been done, yet no Tuberculosis patient can be said to be getting a fair chance in his struggle for life unless he has a house to live in as well appointed and as well situated as those erected in the recent Housing Schemes.

HOUSING.

I am pleased to be able to state that the immediate future prospect with regard to the Housing conditions of the working class population of the Town is happier than it has been since the War. In the last Survey Report for 1925 the Chief Sanitary Inspector drew the attention of the Council to the enormous extent and seriousness of overcrowding in the Town. He also pointed out that thousands of houses were falling into dilapidation and disrepair due to the neglect of owners to carry out systematic maintenance repairs.

In the interval the Housing Committee has carried out a vigorous house-building programme, which, together with the assistance of private enterprise, has resulted in an addition of over 2,000 houses. Meanwhile substantial improvement has been effected in the condition of existing working class dwellings. The Housing Act of 1925 gave fairly wide powers to Local Authorities for securing the repair and renovation of houses not in all respects reasonably fit for human habitation. In July, 1926, an additional Inspector was appointed so as to permit of systematic house-to-house inspections being carried out. Statutory notices under Section 3 of the Housing Act, 1925, have been served in connection with almost all the houses inspected. These notices have called for repairs of the most extensive and thorough character and have demanded the provision of such extra amenities as additional water supply, closet accommodation, etc., deemed necessary to render the houses in all respects reasonably habitable. Smethwick has probably made more use of this valuable Section 3 than any other town of similar population in the kingdom. Since the work was embarked upon three thousand, five

hundred houses have been dealt with, and the improvements effected are among the tangible results of the Health Department's activities which will be visibly apparent to anyone who takes the trouble to make periodic tours around the poorer districts of the town.

The position to-day then is nothing like so black as it was five years ago but it is in looking forward during the next five years that one has justification for optimism. The Housing Act of 1930 which came into force in August of the year under review, gives increased powers for dealing with slum properties and for the first time places the obligation of re-housing dispossessed slum-tenants on the Local Authority, the authority to receive a per capita grant for each person re-housed

Local Authorities were required to submit to the Minister of Health before the end of 1930 their proposals for house building and for slum clearance operations during the next five years.

The Smethwick Council is to be congratulated on having set itself an ambitious programme. The number of houses which the Housing Committee aims to build in that period is 3,750 and of this number 654 will be allocated for the purposes of the Housing Act, 1930, i.e., for re-housing dispossessed slum tenants. This allocation of houses is sufficient to enable the Health Department to deal in the next five years with the whole of its slum clearance problem and I am glad that the Council has been courageous enough to embark upon its attack on slums in such a determined manner.

Four Improvement Areas have been provisionally determined upon, containing in all 1,148 houses and six small clearance areas containing 66 houses. Two of the Clearance Areas have already been represented and declared. In addition to the houses in improvement and clearance areas there are a number of isolated individual unfit houses scattered throughout the Town, and these will be dealt with under Section 19 of the Act.

The work of securing the repair of houses is not to be suspended whilst the slum clearance is proceeding. The Health Committee estimates that the number of houses to be repaired under Section 17 of part 2 of the Act during the next five years will be 2,000.

When the five years programme is completed the Council will be in the happy position of being able to claim that all its townspeople are housed under conditions which conform at least to a minimum standard of reasonable fitness for habitation.

My thanks, and the thanks of the Council, are due to Mr. Wright, the Chief Sanitary Inspector, for the enthusiastic and efficient way in which he has carried out this work.

PROPAGANDA.

The usual programme of propaganda work was carried out during the year. Fortnightly talks were given to the mothers at each Welfare centre, and a series of Talks to Men were given on alternate Wednesdays

throughout the Winter. These latter were very well attended indeed, the number at each lecture being considerably increased over last year. In addition, the series was started earlier in the year, and was carried on until the Spring. Members of the staff also gave a number of lectures on health matters to various local associations and religious and political bodies. "Better Health" was published monthly throughout the year, and we find that it is really widely read. Indeed the demand is now rather greater than the supply, although 2,000 copies are circulated monthly.

No Health Week was celebrated; it is the policy of the department to endeavour to make every week a Health Week, and to educate the public in Health matters continuously and not spasmodically. The man in the street will only learn new and better habits from having them preached to him time and time again; one lecture once a year is useless.

One wonders if the public conscience in health matters is really progressing when one reads an account of individuals who were closed in sealed cases and exhibited to the public because they were endeavouring to achieve the notoriety of having fasted longer than someone else.

I trust that the day is not far away when such exhibitions will be impossible, not because of legislation, but because of lack of public support, and the strength of outraged public opinion.

In conclusion, I would like to express my sincere thanks to the Health and Hospital Committees for their sympathetic support, and for the generous spirit in which they have endeavoured to further all the efforts of this Department.

My thanks are also due to the Press, and to the "Telephone" in particular, for the helpful way in which they have co-operated with us in matters of Health propaganda, especially during the diphtheria epidemic, when they rendered us valuable service by rousing the public to the need for seeking protective inoculation.

I would also like to thank Dr. Cookson, Deputy Medical Officer of Health, for his assistance in compiling this report, to Mr. Roe and to the rest of the staff for their loyalty and co-operation, and to my colleagues in the other departments of the corporation service.

I am, Mr. Mayor, Ladies and Gentlemen,

Your obedient servant,

HUGH PAUL, M.D., D.P.H.,
Medical Officer of Health.

ESTIMATED NET EXPENDITURE ON PUBLIC HEALTH SERVICES FOR THE YEAR ENDED 31st MARCH, 1931.

	Amount.	Rate in £
	£	s. d.
Infectious Diseases :—		
Notification	80	.06
Prevention	671	.47
Smethwick and Oldbury Joint Hospital	4180	2.96
South Staffs. Joint Smallpox Hospital	152	.11
Maternity and Child Welfare	4701	3.33
Venereal Diseases	321	.23
Tuberculosis	7614	5.40
Mental Deficiency	2117	1.50
Food and Drugs Act	305	.22
Smoke Investigation	25	.02
Fertilisers and Feeding Stuffs Act ...	11	.01
Blind Persons' Act	982	.70
Staffs. Mental Hospitals Board	2014	1.43
Midwives' Acts 1902-1918	23	.02
Medical Inspection of School Children ...	2125	1.51
Salaries (not otherwise charged) ...	2863	2.03
National Insurance Contributions	29	.02
Superannuation Contributions	141	.10
The Uplands	400	.28
Establishment Charges	450	.32
	<hr/> £29,204 <hr/>	<hr/> 1 - 8.72 <hr/>
PUBLIC ASSISTANCE :—		
Hospitals	19585	1 - 1.89
Lordswood Nursery	220	.15
Convalescent Homes	275	.19
Great Barr Colony	1800	1.28
Mental Cases in Asylums	10475	7.43
Registration and Vaccination	350	.25
	<hr/> £61,909 <hr/>	<hr/> 3 - 7.91 <hr/>

Owing to the operation of the Local Government Act, 1929, the expenditure is now shown as considerably higher than previous years. This is mainly caused by the fact that the "Block" grant received from the Ministry cannot be allocated to specific services in the same way as formerly when a separate grant was received in respect of each service.

Annual Report, 1930.

GENERAL STATISTICS.

AREA 2,500 acres.

POPULATION: Census 1921—75,757.

Estimate Mid-year, 1930—85,120.

NUMBER OF INHABITED HOUSES: 1921—15,895.

1930—20,373

NUMBER OF FAMILIES OR SEPARATE OCCUPIERS: 1921—16,366.

RATEABLE VALUE: £374,372.

SUM REPRESENTED BY A PENNY RATE: £1,410.

EXTRACTS FROM VITAL STATISTICS FOR THE YEAR 1930.

		Totals	Males.	Females.
BIRTHS: Legitimate	...	1,490	749	741
Illegitimate	...	46	27	19
		<hr/> 1536	<hr/> 776	<hr/> 760

BIRTH-RATE: 18.0 per 1,000 of the population.

DEATHS: Total 889. Males, 486. Females, 403.

DEATH-RATE: 10.4 per 1,000 of the population.

DEATHS OF INFANTS under one year of age: Total, 102. Males, 64. Females, 38.

INFANT MORTALITY RATE per 1,000 births:—Total, 66.4. Legitimate, 62.4. Illegitimate, 195.6.

DEATHS FROM:—

				Number.	Rate per 1,000 of Population.
Enteric Fever	...	...	...	—	—
Measles	...	...	...	2	0.02
Whooping Cough	...	...	...	1	0.01
Diarrhoea & Enteritis (under 2 years)				9	0.10
Diphtheria	...	...	...	21	0.24
Scarlet Fever	...	...	...	2	0.02
Influenza	...	...	...	10	0.11
Cancer	...	...	...	109	1.28
Respiratory Diseases	...	...	...	100	1.17
Pulmonary Tuberculosis	...	...	...	57	0.67
Other forms of Tuberculosis	...	...	...	10	0.11

BIRTH-RATE, DEATH-RATE, AND ANALYSIS OF MORTALITY DURING THE YEAR 1930.

	BIRTH-RATE PER 1,000 TOTAL POPULATION		ANNUAL DEATH-RATE PER 1,000 POPULATION									RATE PER 1,000 BIRTHS		PERCENTAGE OF TOTAL DEATHS			
			All Causes	Enteric Fever	Small-pox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Violence	Diarrhoea and Enteritis (under 2 years)	Total Deaths under 1 year	Certified by Regd. Med. Practitioners	Inquest Cases	Certified by Coroner after P.M.	No Inquest, No Inquest.
	Live Births	Still- births															
England and Wales ...	163	0.69	11.4	0.01	0.00	0.10	0.02	0.05	0.09	0.12	0.55	6.0	60	90.4	6.9	1.7	
107 County Boroughs and Great Towns, including London ...	166	0.71	11.5	0.01	0.00	0.15	0.02	0.05	0.10	0.11	0.50	8.3	64	90.6	6.6	2.3	
109 Smaller Towns (1921 Adjusted Populations, 20,000—50,000) ...	162	0.69	10.5	0.00	0.00	0.08	0.01	0.05	0.07	0.13	0.43	4.4	55	91.8	5.9	1.2	
London ...	157	0.56	11.4	0.01	0.00	0.23	0.02	0.03	0.10	0.08	0.55	9.9	59	88.3	7.4	4.3	
SMETHWICK ...	18.0	0.84	10.4	—	—	0.02	0.02	0.01	0.24	0.11	0.39	5.8	66	91.8	4.9	2.8	

The total deaths registered in Smethwick numbered 541; 7 of these were non-residents and were transferred to other districts, while 355 Smethwick residents died in other districts, and have been added to the number registered in the Borough. The nett deaths thus number 889, giving a rate of 10.4 per 1,000 of the population. Deaths under 5 years of age represent 14.8 per cent. of the total, against 17.1 per cent. last year, while deaths over 65 years of age represent 39.8 per cent. of the total, compared with 36.9 per cent. last year. The mean age at death was 50.5, compared with 48.0 last year, 50.0 in 1928, 46.7 in 1927, 46.4 in 1926, 45.8 in 1925, 43.8 in 1924, and 43.6 in 1923.

The decline in the birth-rate was arrested in 1929, the figure being 17.8 per 1,000 of the population. The rate for 1930 was 18.0, as against 16.7 for 1928, and 17.0 for 1927. Twenty-five years ago the rate was 31.2 per 1,000.

The Infant Mortality rate for the year was 66.4 per 1,000 births. This compares with 60 for England and Wales, and 64 for the 107 great towns. Over sixty-three per cent. of the infant deaths occurred during the first four weeks of life (neo-natal deaths).

A table showing the cause of death at different age periods will be found in the Appendix to this Report, and a similar table relating to the deaths of infants under one year, appears on page 63.

COMPARISON OF RATES IN THE VARIOUS WARDS.

Ward	Estimated Population	Total Acreage	Density	Infant Mortality rate	Respiratory Diseases Death-rate	General Death-rate
Spon Lane	... 13,596	515	26.4	51.3	1.1	9.4
Sandwell	... 9,799	411	23.8	78.0	1.5	13.2
Uplands	... 8,957	255	35.1	78.3	1.5	10.7
Bearwood	... 9,759	190	51.3	38.4	1.2	9.9
Cape	... 11,224	158	71.0	53.0	1.0	9.1
Victoria	... 10,243	176	58.1	67.6	0.9	11.1
Soho	... 9,747	224	43.5	65.9	0.8	12.6
Warley	... 11,795	571	20.6	78.7	1.1	8.3
Totals	... 85,120	2,500	34.0	66.4	1.1	10.4

REVIEW OF VITAL STATISTICS IN SMETHWICK DURING THE
PAST 25 YEARS.

Year	Estimated population	Birth rate per 1,000	Death rate per 1,000	Infant mor- tality rate per 1,000 births	Zymotic death rate per 1,000	Death rates per 1,000				
						Respiratory diseases	Pulmonary tuber- culosis	Non- pulmonary tuberculosis	Cancer	
1906	... 65,000	31.2	14.6	130	2.21	2.7	1.03	0.50	0.67	
1907	... 67,000	29.4	14.34	116	1.43	3.1	0.78	0.31	0.85	
1908	... 69,500	30.0	14.5	135	1.84	2.7	0.86	0.53	0.70	
1909	... 70,300	28.1	13.4	116	2.23	2.8	0.82	0.38	0.78	
1910	... 72,000	27.35	12.42	108	1.3	2.1	0.84	0.33	0.54	
1911	... 70,681	27.8	14.6	140	2.3	2.6	0.94	0.49	0.79	
1912	... 73,372	25.8	12.32	111	0.9	2.8	0.9	0.20	0.7	
1913	... 72,936	28.1	14.98	127	2.1	3.1	0.8	0.10	0.76	
1914	... 72,975	27.5	14.13	106	1.67	3.4	1.26	0.19	0.89	
1915	... 72,439	25.88	13.8	109.3	2.13	3.02	1.10	0.21	0.93	
1916	... 78,335	22.04	11.08	93.8	0.77	3.33	1.20	0.15	0.84	
1917	... 78,335	20.32	11.5	99.8	0.71	3.9	1.30	0.05	0.86	
1918	... 76,056	20.28	15.63	102.4	0.6	3.56	1.43	0.16	0.9	
1919	... 73,000	22.19	13.00	84.6	0.45	3.2	1.19	0.12	1.03	
1920	... 75,027	27.08	11.16	82.18	0.64	2.4	0.81	0.31	0.92	
1921	... 77,400	25.46	11.11	88.28	0.69	2.27	0.68	0.22	0.85	
1922	... 78,140	21.39	11.22	86.12	0.67	2.31	0.78	0.32	1.13	
1923	... 78,450	20.24	10.82	65.49	0.79	1.82	0.93	0.17	1.04	
1924	... 78,790	20.19	10.12	74.79	0.41	1.87	0.67	0.17	1.20	
1925	... 78,840	18.36	10.36	80.11	0.52	1.91	0.77	0.24	1.10	
1926	... 76,940	18.35	10.39	65.86	0.37	1.88	0.79	0.10	1.26	
1927	... 76,870	17.0	11.9	78.6	0.61	2.26	0.84	0.05	1.19	
1928	... 86,870	16.7	9.7	61.6	0.28	1.52	0.69	0.10	1.11	
1929	... 85,120	17.8	13.4	79.8	0.70	2.58	0.95	0.12	1.23	
1930	... 85,120	18.0	10.4	66.4	0.41	1.17	0.67	0.11	1.28	

NOTIFIABLE DISEASES (OTHER THAN TUBERCULOSIS) DURING THE YEAR 1930.

DISEASE.	TOTAL CASES NOTIFIED.													Cases admitted to Hospital.	TOTAL DEATHS.												
	AGE GROUPS.														AGE GROUPS.												
	All ages	0-1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	65 and upwards		All ages	0-1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	65 and upwards
Small Pox
Enteric Fever
Scarlet Fever
Diphtheria
Erysipelas
Puerperal Fever
Puerperal Pyrexia
Ophthalmia Neonatorum
Cerebro-spinal Fever
Encephalitis Lethargica
Anterior Poliomyelitis...
Polio-encephalitis
Malaria
Dysentery
Primary Pneumonia
Influenzal Pneumonia
TOTALS

PREVELANCE OF, AND CONTROL OVER INFECTIOUS DISEASES.

SCARLET FEVER.

During the year under review 259 cases of Scarlet Fever were notified against 162 last year. Fifty-eight per cent. of the cases were removed to the Joint Isolation Hospital, Holly Lane. Two deaths occurred.

There were 176 cases of Scarlet Fever in children of school age, compared with 104 in the previous year. The incidence was not marked in any particular school.

The age incidence of the persons attacked will be found in the table on page 27.

The incidence of, and mortality from Scarlet Fever during the past ten years is as follows :—

Year	Cases notified	Attack rate per 1,000 population	Number of deaths	Case mortality per cent.
1921	426	5.5	3	0.7
1922	270	3.4	2	0.7
1923	207	2.6	4	1.9
1924	126	1.5	—	—
1925	165	2.0	3	1.8
1926	74	0.9	1	1.3
1927	92	1.2	1	1.0
1928	87	1.0	—	—
1929	162	1.9	—	—
1930	259	3.0	2	0.8

DIPHTHERIA.

During the year under review 281 cases of Diphtheria were notified, compared with 143 during the preceding year.

Twenty-one deaths occurred giving a case mortality of 7.5 per cent.

There were 144 cases in children of school age, against 62 last year. Brasshouse Lane School and to a lesser extent Crocketts Lane School being particularly affected.

Two hundred and twenty-seven or 81 per cent. of the cases were removed to Hospital. The age periods of the persons attacked will be found in the table on page 27.

The incidence of, and mortality from Diphtheria during the past ten years is as follows:—

Year	Cases notified	Attack rate per 1,000 population	Number of deaths	Case mortality per cent.
1921	132	1.7	9	6.8
1922	119	1.5	10	8.4
1923	138	1.75	10	13.7
1924	141	1.78	7	4.9
1925	104	1.3	5	4.8
1926	110	1.4	9	8.1
1927	120	1.5	3	2.5
1928	119	1.4	2	1.7
1929	143	1.6	2	1.7
1930	281	3.3	21	7.5

Antitoxin is supplied free to medical practitioners in the Borough, 362 phials of 8,000 units being issued during the year, compared with 104 last year, and 117 in 1928.

In reviewing the cases of Diphtheria which have occurred this year special reference must be made to the epidemic which began in September, and continued until the end of March, 1931. The usual number of cases of Diphtheria per annum for the past ten years has been about 1.6 per thousand of the population, but the rate for the year 1930 was 3.3 per thousand, which is just double. Not only the numbers but also the severity of the disease increased as shown by the higher mortality rate.

Like most infectious diseases, Diphtheria, has its seasons, and about October and November it is at its peak. September, therefore, should see an increasing number of cases leading up to this peak. During the second week in September, 1930, however, notifications began to arrive at an unusual rate, and in the course of a week or two an epidemic was well established. Hospital accommodation at Holly Lane was soon exhausted, and cases were drafted off to any other hospitals where they could be admitted. December and January marked the peak of the epidemic, and after that the incidence declined as fast as it had arisen.

Perhaps the most striking feature was the localisation to one Ward, viz.—Sandwell. Though there were many cases outside Sandwell Ward, yet at no time was there any suggestion of the epidemic itself spreading. Further, many of the cases outside Sandwell were cases which had recently removed or gone to stay elsewhere and taken the infection with them.

Epidemics are attributable to two main causes, firstly, the cyclical increase in virulence of the strain of the bacillus, and secondly the suitability of the "soil," i.e., the decrease in the resistance of the population. The first factor cannot have been nearly so important in this epidemic as the second factor, because a sudden marked increase in the virulence of the bacillus alone would tend to cause a more widespread area to become infected, and even those people with a relatively high resistance would be likely to succumb to the attack of a highly virulent organism. All the evidence that can be got goes to show that

the population of Sandwell differed in some material way from that of any other ward. And this difference is **not** due to any different conditions under which this population lived. It is commonly asserted that infectious diseases can be traced to faulty sewers and drains. Sandwell Ward is as well sewered and drained as its neighbours Soho and Victoria, yet the latter were relatively immune from this disease. Similarly, the blame cannot be laid on the actual housing conditions, for the same reason, and also because Sandwell Ward has a fine Housing Scheme at Halfords Lane, where people mostly from that ward have been re-housed; but even under these good housing conditions Diphtheria was as rife as in the older parts of Sandwell. Incidentally, this is not to say that bad housing conditions have no connection with Infectious Diseases; actually they have, but only indirectly, and they certainly are not the actual cause of epidemics. The main cause was in the decrease in the resistance of the affected population. It must be remembered that Sandwell ward is virtually an island of Smethwick; no other ward is so completely cut off from its fellows. To the north, fields, a park, disused land, and a few works cut it off from West Bromwich; while on the south side a whole belt of works, railways and canals separate it from the adjacent Smethwick wards. The population is therefore very self contained, and would tend to react as a whole. So while the resistance to Diphtheria in Smethwick as a whole might be at one phase of the usual variation (shown graphically), resistance to the same infection in Sandwell might be at quite a different point. Alternatively the usual cyclical rise in the virulence of the organism would appear to have met a very unresisting phase in Sandwell and a resisting one in Smethwick as a whole, with the result that an epidemic immediately sprang into existence, continued until it had rapidly exhausted the comparatively small amount of suitable material in Sandwell, and then rapidly died out for want of more material to work on. The following two tables show graphically how localised the disease was to the one ward.

TABLE I.—WARD INCIDENCE.

Month.	Spon							
	Lane.	Sandwell.	Uplands.	Bearw'd.	Victoria.	Soho	Cape.	Warley.
1930.								
January	...	1	2	—	—	1	1	—
February	...	—	2	9	—	2	—	2
March	...	1	7	—	1	1	1	—
April	...	1	2	1	—	2	2	1
May	...	1	1	3	1	2	2	2
June	...	1	1	1	—	1	1	—
July	...	—	2	1	—	1	2	1
August	...	1	2	—	—	—	2	1
September	...	5	21	—	—	—	3	2
October	...	2	19	—	—	6	3	1
November	...	2	21	6	—	4	3	1
December	...	7	31	5	1	8	6	1
1931.								
January	...	4	42	10	4	4	—	4
February	...	5	16	6	—	3	2	1
March	...	1	10	2	—	3	1	2

TABLE II.—SCHOOL INCIDENCE DURING THE PERIOD FROM THE 1ST SEPTEMBER, 1930, TO THE 31ST MARCH, 1931.

School.	Cases.
Abbey Road	9
Bearwood Road	2
Brasshouse Lane (in the centre of Sandwell Ward) ..	85
Cape Hill	4
Corbett Street	3
Crocketts Lane (serves a large part of Sandwell Ward)	21
Devonshire Road	11
Holly Lodge	1
Holy Trinity... ..	2
Junior Technical	1
Oldbury Road	1
Old Church	1
Open Air School	1
Sloe Lane	4
St. Matthew's	2
St. Philip's	—
Victoria Special	1
Waterloo Road	13

Little reference needs to be made here to the type of the disease, as this has been dealt with in this Report in connection with Holly Lane Hospital. Table III. has been included here as a matter of interest only to show the age incidence of the disease, also the ages of those who died from it.

TABLE III.—AGE DISTRIBUTION OF (a) CASES NOTIFIED.
(b) DEATHS.

	Cases Notified.	Deaths.
0—5	68	13
5—10	113	12
10—15	54	3
15—20	25	—
20—35	29	—
35 upwards	10	—

This epidemic is the sort of accident that besets all areas at intervals however well cared for, and until the discovery of "immunisation" against Diphtheria, was only to be expected. Now, however, it is possible in 95 per cent. of cases to protect children against diphtheria by two or three injections of toxoid antitoxin spread over a period of about four weeks. This protection takes several weeks to develop but is usually complete in three to six months. The most dangerous time to have diphtheria, and unfortunately the most likely time to contract it, is during the first decade of life. Reference to Table III. will bear this out. For some six months after a baby is born it appears to be protected against diphtheria by an immunity inherited from its mother; but after six months a baby should be regarded as liable to contract diphtheria, and after twelve months it should be regarded as highly susceptible.

Immunising injections should be given after six months of age. If this is done, immunity is acquired which will carry the child right through the most dangerous period, and it seems most probable that sufficient immunity is acquired for the rest of the child's life to protect it against a severe form of the disease. As a matter of fact, for some years the Public Health Department has placed the material at the disposal of the local medical profession, and has offered the injections free at its Child Welfare Clinics, etc., but with poor response up till last year. Since the epidemic however, schools and parents have been circularised and an intensive campaign has been, and is still being carried out, starting in Sandwell Ward. At the present time 1,795 school children have been given a course of injections, and 148 children have been inoculated at the Maternity and Child Welfare Centres.

In the younger children, 0—8 years (those in the Infant Departments of Schools, or attending Maternity and Child Welfare Centres) the immediate results of injections, i.e., the "reaction," have been little or none at all. In older children and in adults sometimes reactions have occurred, but never enough to cause more than a painful arm for a day or two. Unfortunately, this has been responsible for some parents objecting to their children completing the course (fortunately not many, in number 243), but it is a pity that a temporary inconvenience should be allowed to interfere with such material and lasting benefit. It is as foolish as a person insisting on having his teeth extracted under an anæsthetic rather than save them by having them filled because of the pain associated with filling. Attempts were made by an "Anti" Society through a verbose circular, to persuade parents not to have their children thus protected against diphtheria, but I cannot find that these had any effect. Our greatest stumbling block has been the apathy of the parents, who still need education in these matters.

ENTERIC FEVER.

Three cases of typhoid fever and two cases of para-typhoid fever were notified during the year; all were treated in Birmingham hospitals. Three cases occurred in Warley, one in Bearwood, and one in the Cape Ward.

No connection could be identified between the cases and source of infection in any of them.

ENCEPHALITIS LETHARGICA.

One case was reported during the year, against none last year, one in 1928, one in 1927, four in 1926 and seven in 1925. No death occurred.

CEREBRO-SPINAL FEVER.

No case of this disease was reported during the year.

ANTERIOR POLIOMYELITIS.

Three cases of this disease were reported during the year.

POLIO-ENCEPHALITIS.

One case of this disease was reported during the year.

DYSENTERY.

No case of this disease was reported during the year.

SMALLPOX.

No case of smallpox was notified during the year.

Leaflets are distributed at the Infant Welfare Centres and at the Health Office, placing before the public the benefits of vaccination.

The Vaccination Officer's Return for the twelve months ended 30th June, 1930, and for previous years is given below. In 1911-12 the conscientious objectors represented 18.1 per cent.

This figure gradually rose to 34.4 per cent. in 1920-21 and fell to 25 per cent. in 1923-24. Last year the percentage had risen to 42.0, and in view of the continued prevalence of Smallpox throughout the country, this tendency to neglect the protection which vaccination affords is much to be deplored.

VACCINATION RETURNS FOR THE PAST TEN YEARS.

Year ending 30th June,	Births	Vaccinations	Insusceptible	Conscientious objectors	Died unvaccinated	Postponed by medical certificate	Gone to other districts	Gone— no address	Outstanding	Percentage of conscientious objections*
1930	950	416	4	377	53	28	3	26	43	42.0
1929	996	471	3	364	60	14	6	31	47	38.9
1928	1,094	577	4	376	36	10	5	14	72	35.5
1927	1,158	656	—	385	59	12	5	10	31	35.0
1926	1,267	731	2	414	62	20	4	6	28	34.3
1925	1,406	866	3	404	55	29	7	15	27	29.9
1924	1,448	958	2	343	76	13	15	9	32	25.0
1923	1,535	984	—	428	62	15	6	10	30	29.0
1922	1,759	1,024	2	561	101	14	7	17	33	33.8
1921	1,884	1,046	5	608	119	32	10	20	44	34.4

* In calculating these percentages, the number dying unvaccinated has been deducted from the total number of births

N.B.—The above figures exclude the Parish of Warley Woods, which was taken over for Vaccination purposes on 1st July, 1930.

PNEUMONIA.

The cases of Primary Pneumonia notified during the year numbered 141, compared with 278 last year. Fifteen cases of Influenzal Pneumonia were reported against 95 last year. The notifications and deaths for each year since the commencement of the Pneumonia Regulations are as follows:—

Year.	PRIMARY PNEUMONIA		INFLUENZAL PNEUMONIA	
	Notifications.	Deaths.	Notifications.	Deaths
1920	97	46	26	10
1921	70	49	8	3
1922	103	37	51	26
1923	141	37	27	14
1924	89	18	32	12
1925	126	38	24	16
1926	116	24	21	17
1927	167	41	66	33
1928	105	35	32	8
1929	278	71	95	51
1930	141	29	15	4

MEASLES AND WHOOPING COUGH.

It is pleasing to record that Measles was responsible for only two deaths during the year, as against 25 for the previous year. Whooping Cough also showed a marked decline and only one death occurred, compared with 17 in 1929.

INFLUENZA.

The incidence of Influenza was considerably less than in 1929, and the number of deaths was 10, against 77 in the previous year.

INFECTIOUS DISEASES AND DISINFECTION.

Immediately on receipt of a notification of infectious disease the premises are visited by a sanitary inspector. At these visits arrangements are made for the efficient isolation of the patient, or alternatively for removal of the case to the Isolation Hospital. The circumstances in connection with the case, such as occupation of patient and family, sources of water supply and milk supply, probable sources of infection, etc., are recorded and tabulated, and any insanitary conditions found are noted and dealt with. Cards of instruction as to the prevention of the spread of infection are sent to the parents or guardians in each case, and the Education Office notified of all children of school age in infected houses.

On the termination of the illness or on removal of a case to hospital the premises are disinfected by means of formalin spray or lamp and where necessary notices are served upon the owners to strip and lime-wash the rooms occupied by the patient. Infected clothing, bedding, etc., is removed to the Isolation Hospital and dealt with in a Manlove and Elliott's steam disinfecter.

The number of lots of bedding, etc., removed for disinfection during the year was 731, comprising 7,251 articles. The total number of disinfections was 747, and the following is a classified list of the reasons for the disinfection of premises:—

Scarlet Fever	...	...	...	...	228
Diphtheria	...	...	...	...	239
Tuberculosis	...	...	...	...	207
Enteric Fever	...	...	...	...	7
Puerperal Fever	...	...	...	...	5
Puerperal Pyrexia	...	...	...	...	1
Cancer	...	...	...	...	19
Encephalitis Lethargica	...	...	...	...	1
Vermineous Houses	...	...	...	...	4
Schools	...	...	...	...	8
Other causes	...	...	...	...	28
					<hr/>
					747
					<hr/>

BACTERIOLOGICAL EXAMINATIONS.

Arrangements are made for the necessary routine bacteriological examinations to be carried out by the Public Health Laboratory of the University of Birmingham. The number of specimens examined during the year, and the results, are set out below:—

Nature of Specimen.					Number.	Positive.	Negative.
Throat Swabs, for Diphtheria bacilli—							
Suspects	...	...	...	...	587	142	445
Contacts	...	...	...	...	237	35	202
Nasal Swabs for Diphtheria bacilli—							
Suspects	...	...	...	...	14	9	5
Contacts	...	...	...	...	47	11	36
Exudate from Eyes for Gonococci...					9	9	—
Blood for B. Typhosus	...	...	...	...	4	—	4
Blood for B. Para-Typhosus	...	...	...	...	4	2	2
Fæces for B. Typhosus, Enteric Group					1	—	1
Sputum for Tubercle bacilli	...	...	...	...	320	34	286
Milk for Bacterial Count	...	...	...	...	186	—	—
Milk for Tubercle bacilli	...	...	...	...	60	10	50
Totals					1,469	252	1,031

In addition to the above, 348 swabs were examined for Diphtheria bacilli at the Hospital, Holly Lane, from patients in the hospital, 27 giving positive and 321 negative results. Two consecutive negative swabs are required before a patient is discharged.

In connection with the patients in the Tuberculosis Pavilion at Holly Lane Hospital 245 examinations of sputum were made during the year, 76 giving positive, and 169 negative results.

SMETHWICK & OLDBURY JOINT ISOLATION HOSPITAL.

STATEMENT OF CASES ADMITTED AND DISCHARGED DURING THE YEAR 1930.

	Number of Cases in Hospital on December 31st, 1929.				Number of Cases Admitted during 1930.				Cases Discharged, Died, or Transferred to other Institutions during 1930.				Number of Cases in Hospital on December 31st, 1930.		
	Males.	Females.	Children under 16	Total.	Males.	Females.	Children under 16	Total.	Males.	Females.	Children under 16	Total.	Males.	Females.	Children under 16
SMETHWICK :															
Scarlet Fever	8	8	5	9	130	144	4	9	135	148	1	...	3
Diphtheria	9	9	8	22	143	173	7	19	115	141	1	3	37
OLDBURY :															
Scarlet Fever	6	6	...	1	95	96	...	1	94	95	...	...	7
Diphtheria	2	2	1	...	33	34	...	...	34	34	1	...	1
TIPTON :															
Diphtheria	3	3	...	...	3	3	...	...	...
Totals	25	25	14	32	404	450	11	29	381	421	3	3	48
															54

SCARLET FEVER :—The following complications occurred :

	Cases
Adenitis
Arthritis
Otorrhoea
Nephritis
Tonsillitis, etc.
	11

DIPHTHERIA :—The following complications occurred :

	Cases
Cardiac paresis
Palatal paresis
Otorrhoea
Tonsillitis and Post-tonsillar Abscess	...
Tracheotomy was performed in 8 cases during the year, of which 4 recovered.	2

SMETHWICK AND OLDBURY JOINT HOSPITAL.

Up till September, 1930, the work at the Hospital followed the same lines as in previous years, and there was no material increase in admissions, or noteworthy alteration in accommodation or staff.

From the beginning of September, however, the notifications of diphtheria began to increase, slowly at first, and then more rapidly, and the hospital was called upon to deal with the most severe epidemic of diphtheria which the Borough had experienced for many years. The epidemic is dealt with elsewhere in this report, and only those features which affect the Isolation Hospital are touched upon here.

As will be seen from the table below the number of patients admitted with diphtheria during 1930 rose sharply during the last three months of the year, and it was necessary at an early stage in the epidemic to send some of the cases to other authorities, notably Birmingham and West Bromwich, and later on to Hayley Green Isolation Hospital, near Stourbridge. In all 54 such cases were sent outside the Borough at a cost of about £1,200. In this way it was possible to deal with the most urgent cases as they arose, but soon the surplus accommodation in neighbouring towns became used up, and we found that outside authorities could no longer take our cases. In December, therefore, we reluctantly decided to close the Tuberculosis Block and transfer the staff thus liberated to B. Block, thus enabling us to have A., B. and C. Blocks all open together; this had never been possible before because of the shortage of living and sleeping accommodation to house the necessary staff.

ADMISSION OF SMETHWICK DIPHTHERIA CASES TO HOLLY LANE.

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jly.	Aug.	Sept.	Oct.	Nov.	Dec.	
1929 ...	6	14	1	11	4	8	5	7	7	14	14	8	
1930 ...	9	12	11	12	11	6	5	6	17	15	20	49	B. Block Opened.
1931 ...	26	19	21	—	—	—	—	—	—	—	—	—	

In passing, the question of accommodation for staff is worth commenting upon. At the present time the Nursing Staff is housed partly at the Administration Block, "The Home," partly in a temporary structure built for the purpose (but which offers poor comfort and no luxuries of any sort). The Domestic Staff is similarly scattered, being housed partly in "The Home" and partly in rooms above the Wards. There is not a building or a room anywhere which could be used as a reserve in case of necessity. Schemes for enlarging the Hospital and Administrative Block, thereby increasing the accommodation for the Staff, have been put forward from time to time, but for various reasons have been postponed. It is not without interest to note that because

of this lack of accommodation for extra Staff, 54 cases of diphtheria in all, had to be sent to other hospitals at a cost to the Borough of £1,200 (plus cost of transferred Tuberculosis patients), when accommodation was actually waiting for them in Holly Lane, but no quarters for Staff to nurse them. It is to be hoped than an enlargement scheme now before the Joint Hospital Committee will take tangible form, and will be pushed on as quickly as possible to prevent a repetition of this unfortunate and costly experience.

During the year 1930, 210 cases of diphtheria were admitted to Holly Lane Hospital, 173 from Smethwick, 34 from Oldbury and 3 from Tipton; of these half were admitted during the last four months. To make the comparison more marked, the total number of cases admitted during the epidemic period September 1st, 1930—March 31st, 1931 was 167, while for a similar period twelve months before it was only 75.

Although the Annual Report is a review of 1930, it is a convenient opportunity to deal with the epidemic as a whole so far as it concerns the hospital. Some of the outstanding facts are given below, those figures in the first column representing eight months from January to September, 1930, and in the second column seven months from September, 1930—till March 31st, 1931. Inasmuch as the two periods, although almost equal in length, are not spread over the same seasons of the year, they are not strictly comparable; still they do afford some rough comparisons.

			Jan.-Aug., 1930.	Sept., 1930— Mar., 1931.
Total admissions from Smethwick	...	...	72	167
Total admissions from Oldbury and Tipton	...	...	26	17
		Total	98	184
Average age of Admission	...	...	11	8.8
Day of disease on admission	...	...	5.4	4.1
Serum injected before admission in	...	...	10%	56%
CLASSIFICATION OF ADMISSIONS.				
Faucial Diphtheria	...	...	53%	67%
Nasal Diphtheria	...	...	13%	3%
Laryngeal Diphtheria	...	...	12%	6%
Non-Clinical, but positive swab	...	...	16%	13%
Non-Diphtheria	...	...	6%	11%
Tracheotomy performed	...	...	5	7
Total Deaths	...	...	3 = 3%	18 = 10%
Paralytic and other toxic complications in all cases	...	...	17 = 17%	20 = 12%
Paralytic and other toxic complications in Faucial cases only	...	...	= 34%	= 37%

It is in keeping with experience in the hospital wards to find the age of the patients lower than usual, and for the patients to have been admitted earlier in the disease, an average of the 4.1 days instead of the 5.4 days after the onset. The question of treatment of patients admitted on bacteriological evidence only (swab positive cases), with no clinical signs will be dealt with elsewhere. The Death Rate rose sharply during the epidemic, but the figure of 27 deaths occurring in seven months in the whole epidemic (i.e., all hospitals and those privately nursed), is not sufficiently large to make any reliable statistical comparison between that and the usual one or two cases per annum for Smethwick.

A gratifying increase in the number of patients given Anti-toxin Serum by doctors outside before admission is shown. In the first eight months of 1930, only 10 per cent. of patients were so treated before admission, but during the epidemic this figure rose to 56 per cent., which is extremely good. It must be remembered that even the giving of an injection in a private house is not such a simple process as it may seem, especially if that house happens to be a small, overcrowded, ill-lighted house with no water laid on, with no one present capable of assisting the doctor with a sick and frightened child; and these were the conditions typical of the great majority of cases during the epidemic.

The question of the admission to hospital of diphtheria cases which have no clinical evidence of the disease, but simply a bacteriological report on a swab showing the presence of diphtheria bacilli in the throat, is a difficult one. The fact that diphtheria bacilli have been found in a person's throat does not prove that that person has, or has had, diphtheria. The organism may not be virulent; in fact it may be quite harmless. Experiments have frequently been made of swabbing the throats of perfectly healthy people only to find quite a fair percentage with diphtheria bacilli present on bacteriological examination. When, however there is clinical evidence of some diseased throat condition, it should be decided straight away whether it is likely to be diphtheria or not, and if it is considered to be diphtheria, serum should be given, and the patient removed to hospital if it is not possible to nurse it under suitable conditions at home; if there appears no chance of it being diphtheria, a swab can be taken as a matter of interest. The important point is that the decision to regard a case as diphtheria or not should be made on seeing the patient, and no delay for the report on a swab should be allowed at all. The taking of swabs in ordinary practice is to be discouraged; it is only of use in trying to trace carriers of the disease in a given community. In its place the Schick Test should be used. A doubtful case can be given the Schick Test, and after allowing twelve hours to elapse, Anti-diphtheria Serum should be given if there is any doubt at all. There is practically no delay; and while the patient is thus protected, he is also being definitely diagnosed.

As stated at the beginning of this Report of the Hospital, the outstanding feature of the year's work has been that on the Diphtheria Blocks. Nothing unusual occurred in Scarlet Fever work. And on the Tuberculosis side, it seems possible to express gratification at the in-

creasing popularity of this pavilion for Sanatorium treatment. This Block suffers firstly from being too near the patients' homes, and many are unwilling to recognise that good Sanatorium work can be done even in Smethwick, they commonly remark that "the air at Holly Lane is just the same as at my own home." The value of Sanatorium treatment is far more in the training of patients how to live, than in merely giving them purer air. Secondly, so many patients have been to the fine buildings and equipment at Romsley, that the Holly Lane Block looks mean and poor by comparison. However, an increasing number of patients, especially men, realise that they do derive considerable benefit from a course of treatment here, in spite of the fact that because advanced bed cases cannot be sent elsewhere, they have all to be collected here, so giving the appearance of Holly Lane being for advanced cases only. This reputation is to be avoided at all costs, as the mental effect on patients and staff is bad.

The transference of Staff from Tuberculosis work to Diphtheria work, and the running of two Diphtheria Blocks and one Scarlet Fever Block was not accomplished without a great deal of extra work and organisation. During the epidemic everyone associated with the hospital from the Deputy Medical Officer of Health, the Matron, Sister and nurses and the domestic staff to the ambulance-driver and gate-keeper, had a tremendous amount of added work and responsibility, greatly increasing the ordinary hours worked. Moreover the strain thrown particularly on the Nursing Staff was very great because Diphtheria is far and away the most exacting of the ordinary infectious diseases to nurse, and one in which emergencies most quickly arise. This Report cannot be closed without paying tribute to the splendid work of all those mentioned who without any extra help dealt so capably with such a difficult situation.

ANNUAL REPORT OF THE TUBERCULOSIS OFFICER FOR THE YEAR 1930.

NOTIFICATIONS.

Ninety-five notifications were received during the year, 76 of Pulmonary Tuberculosis and 19 of other forms of the disease.

The following table shows the notifications received and the attack-rate for each year since the commencement of the Public Health (Tuberculosis) Regulations, 1912:—

		Attack Rate per			
		Notifications received: 1,000 of the population.			
		Pulmonary.	Other forms	Pulmonary.	Other forms.
1912	.....	307	—	4.1	—
1913	.....	318	50	4.3	0.68
1914	.....	143	167	1.9	2.2
1915	.....	229	103	3.1	1.4
1916	.....	204	117	2.6	1.4
1917	.....	206	126	2.6	1.6
1918	.....	194	80	2.5	1.0
1919	.....	260	60	3.5	0.8
1920	.....	146	31	1.9	0.4
1921	.....	88	14	1.1	0.18
1922	.....	112	17	1.4	0.2
1923	.....	80	18	1.02	0.2
1924	.....	110	18	1.39	0.2
1925	.....	74	24	0.9	0.3
1926	.....	94	16	1.2	0.2
1927	.....	87	38	1.1	0.49
1928	.....	73	25	0.8	0.29
1929	.....	108	34	1.2	0.4
1930	.....	76	19	0.89	0.22

The deaths from all forms of Tuberculosis during the year numbered 67, of which 59 were notified cases, and 8 not notified; 5 of these were deaths occurring outside the Borough. The ratio of unnotified deaths to the total deaths is 11.9 per cent., against 11.9 per cent. last year, and 5.8 per cent., 4.3 per cent., 8.7 per cent., 25 per cent., 26 per cent., 29.8 per cent., in the six preceding years. The steps taken to secure better notification have thus had satisfactory results.

The following table shows the total NEW CASES during the year, i.e., all PRIMARY NOTIFICATIONS and also other NEW CASES coming to the knowledge of the Medical Officer of Health from the death returns or otherwise, and also the deaths registered during the year :—

TUBERCULOSIS.

AGE PERIODS.	NEW CASES.				DEATHS.			
	Pulmonary.		Other forms.		Pulmonary.		Other forms.	
	M	F	M	F	M	F	M	F
0 to 1	—	—	—	—	—	—	1	—
1 to 5	1	—	—	3	1	—	—	2
5 to 10	1	—	3	2	—	—	—	1
10 to 15	...	—	3	1	—	—	—	—
15 to 20	4	6	2	1	3	2	—	1
20 to 25	5	5	—	1	2	3	—	—
25 to 35	15	9	3	—	10	4	2	—
35 to 45	13	4	1	—	7	4	—	—
45 to 55	14	4	—	—	7	5	1	—
55 to 65	5	—	1	—	6	2	2	—
65 upwards	...	1	—	—	1	—	—	—
TOTALS	58	29	13	8	37	20	6	4

The discrepancy between the number of new cases and the number of notifications received is accounted for by the unnotified deaths and cases transferred from other areas.

DEATH-RATE FROM TUBERCULOSIS PER 1,000 POPULATION.

Five-Year Period.	Pulmonary.	Other Forms.	All Forms.
1902-1906	0.83	0.48	1.31
1903-1907	0.83	0.47	1.30
1904-1908	0.87	0.49	1.36
1905-1909	0.84	0.48	1.33
1906-1910	0.87	0.41	1.28
1907-1911	0.85	0.41	1.26
1908-1912	0.88	0.42	1.30
1909-1913	0.885	0.375	1.26
1910-1914	0.95	0.34	1.29
1911-1915	1.00	0.31	1.31
1912-1916	1.04	0.24	1.28
1913-1917	1.12	0.18	1.30
1914-1918	1.20	0.15	1.35
1915-1919	1.20	0.14	1.34
1916-1920	1.14	0.17	1.31
1917-1921	1.03	0.20	1.23
1918-1922	0.93	0.24	1.17
1919-1923	0.86	0.25	1.11
1920-1924	0.76	0.26	1.02
1921-1925	0.75	0.24	0.99
1922-1926	0.79	0.20	0.99
1923-1927	0.80	0.15	0.95
1924-1928	0.75	0.14	0.89
1925-1929	0.76	0.12	0.88
1926-1930	0.78	0.10	0.88

The above figures which show the death-rates from tuberculosis in Smethwick for over a generation are very informative. In order to make the results more comparable, and to smooth the curve of inequalities due to non-recurring causes, such as influenza epidemics, the figures shown are for five yearly periods and not for single years.

From 1902 to 1912 when tuberculosis was not compulsorily notifiable the figures for the deaths cannot be taken as reliable, and it is certain that the actual number of deaths from tuberculosis was higher than that recorded in the death returns. This fact mainly accounts for the apparent rise in the death-rate from pulmonary tuberculosis in the five-year group 1910-1914, and 1911-1915. We may, therefore, assume that a death-rate from pulmonary tuberculosis of about one per 1,000 was normal in the years immediately preceding the war. The bad conditions and the poor food during the war were responsible for sending the death-rate up considerably, and the average for the war period rose to 1.20 per 1,000. From 1919, the decline in the death-rate from the pulmonary type of the disease has been fairly substantial, for the past five years the average has been 22 per cent. below the pre-war figures. It is to be hoped that a similar reduction will take place during the next ten years.

NON-PULMONARY TUBERCULOSIS.

The decline in the death-rate from non-pulmonary tuberculosis during the past 25 years has been spectacular, and the deaths for the past five years have been less than one quarter of the deaths of 25 years ago. The decrease has been progressive and except for the war years has been uninterrupted. During the war years 1914-19, curious to say, the death-rate actually dropped, and it is difficult to account for this except by assuming that possibly the weaker children (for non-pulmonary tuberculosis usually attacks children) were unable to survive the bad war conditions long enough to attain the age when tuberculosis attacks and kills.

The steady and progressive decline in the death-rate from a figure of 0.48 in 1902-6 to 0.10 during the past five years is very gratifying and encouraging.

Return showing the work of the Dispensary (or Dispensaries) during the year 1930.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY.				TOTAL.			
	Adults.		Children.		Adults.		Children.		Adults.		Children.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
*A.—NEW CASES examined during the year (excluding contacts):												
(a) Definitely tuberculous ...	49	32	3	3	3	4	4	11	52	36	7	14
(b) Doubtfully tuberculous ...	—	—	—	—	—	—	—	—	—	4	—	3
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	27	19	17	6
B.—CONTACTS examined during the year:—												
(a) Definitely tuberculous ...	—	—	—	—	—	—	2	1	—	—	2	1
(b) Doubtfully tuberculous ...	—	—	—	—	—	—	—	—	3	—	2	3
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	26	35	30	36
C.—CASES written off the Dispensary Register as:—												
(a) Cured ...	—	8	—	—	1	—	3	1	1	8	3	1
(b) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error) ...	—	—	—	—	—	—	—	—	58	50	61	43
D.—NUMBER OF PERSONS on Dispensary Register on Dec. 31st:												
(a) Diagnosis completed ...	140	150	9	6	20	30	68	47	160	180	77	53
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	3	3	2	4

*No case written off the Register in a previous year as "cured" was again entered during 1930.

1.—Number of persons on Dispensary Register on January 1st ...	444
2.—Number of patients transferred from other areas and of "lost sight of" cases returned	5
3.—Number of patients transferred to other areas and cases "lost sight of"	17
4.—Died during the year	49
5.—Number of observation cases under A (b) and B (b) above in which period of observation exceeded 2 months ...	9
6.—Number of attendances at the Dispensary (including Contacts)...	3,096
7.—Number of attendances of non-pulmonary cases at Orthopædic Out-stations for treatment or supervision	—
8.—Number of attendances, at General Hospitals or other Institutions approved for the purpose, of patients for	
(a) "Light" treatment	982
(b) Other special forms of treatment	—
9.—Number of patients to whom Dental Treatment was given, at or in connection with the Dispensary	25
10.—Number of consultations with medical practitioners	
(a) At Homes of Applicants	68
(b) Otherwise... ..	239
11.—Number of other visits by Tuberculosis Officers to Homes ...	54
12.—Number of visits by Nurses or Health Visitors to Homes for Dispensary purposes	2,504
13.—Number of	
(a) Specimens of sputum, &c., examined	245
(b) X-ray examinations made, in connection with Dispensary work	105
14.—Number of Insured Persons on Dispensary Register on the 31st December	209
15.—Number of Insured Persons under Domiciliary Treatment on the 31st December	10
16.—Number of reports received during the year in respect of Insured Persons:—	
(a) Form G.P. 17	2
(b) Form G.P. 36	1

TABLE SHEWING ADMISSIONS to, and DISCHARGES from, SANATORIA during the Twelve Months ended
December 31st, 1930

NAME OF INSTITUTION	Number of Cases in Sanatorium on January 1st, 1930.			Number of Cases admitted during 1930.			Cases discharged or transferred to the Chest Clinic.			Number of Cases in Sanatorium on December 31st, 1930			Number of Deaths.		
	Males	Females	Total	Males	Females	Children under 16	Total	Males	Females	Children under 16	Total	Males	Females	Males	Females
Romsley Hill	10	6	16	24	31	...	55	24	29	...	53	9	7	1	1
Holly Lane	12	4	17	46	21	12	79	49	20	13	82	...	...	9	5
The Woodlands, Northfield	...	...	2	...	...	3	3	...	...	1	1	...	...	...	...
The Fore ands, Bromsgrove	...	...	4	...	...	...	...	...	...	3	3	...	...	...	...
Shropshire Orthopedic Hospital	...	1	1	...	...	...	...	...	1	...	1	...	...	...	...
Royal National Hospital, Ventnor	...	1	1	...	...	...	...	...	1	...	1	...	...	...	...
Knightwick Sanatorium	2	...	2	3	...	2	5	4	...	1	5	1	...	...	...
Burrow Hill Colony	...	...	...	...	...	2	2	...	...	1	1	...	...	...	...
Hermitage Sanatorium	...	...	...	6	...	...	6	6	...	...	6	...	...	...	...
Creaton Sanatorium	...	...	...	10	1	...	11	4	...	...	4	6	1	...	...
Liverpool San., Frodsham	...	...	...	2	...	...	2	2	...	...	2	...	...	...	...
East Anglian Sanatorium	...	...	...	...	...	1	1	...	...	1	1	...	...	...	...
Ryl. Cripples' Hospital, Edgbaston	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
West Heath Sanatorium, B'ham...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...
Dudley Road Hospital, B'ham	...	...	...	1	...	...	1	...	...	...	...	1	...	...	...
Totals	24	12	43	92	54	21	167	89	51	20	160	17	9	10	6

RESIDENTIAL INSTITUTIONS.

(A) Average Number of Beds available for Patients during the Year 1930.

	Observation.	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Total.
		"Sanatorium" Beds.	"Hospital" Beds.	Diseases of Bones and Joints	Other conditions	
Adult Males	12 Chalets	15	12	1		40
Adult Females ... ..	...	11	10	...		21
Children under 15 ... ..	...	...	...	6		6
Total	12 Chalets	26	22	7		67

(B) Return showing the Extent of Residential Treatment during the Year 1930,

				In Institutions on Jan. 1.	Admitt'd during the year.	Dis- charged during the year.	Died in the Institu- tions.	In Institu- tions on Dec. 31		
Number of Patients	...	{	Adults	{ M. F.	24 12	85 53	82 50	10 6	17 9	
			Children	{ M. F.	6 1	10 7	11 5	... ...	5 3	
	Number of Observation Cases	...	{	Adults	{ M. F.	... ...	7 1	7 1	......	......
				Children	{ M. F.	... ...	2 2	2 2	......	......
Total				43	167	160	16	34		

MEMO. 37/T. TABLE III.

**Return showing the immediate results of treatment of patients
and of observation of doubtful cases discharged from Residential
Institutions during the year 1930.**

Classification on admission to the Institution.		Condition at time of discharge.	Duration of Residential Treatment in the Institution.												Total
			Under 3 months.			3—6 months.			6—12 months.			More than 12 months.			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS.	Class T.B. minus.	Quiescent ... ..	...	...	...	...	1	...	1	...	...	...	...	2
		Improved	8	7	3	13	8	5	3	1	1	...	...	49
		No material improvement	4	2	...	...	...	...	...	...	...	...	...	6
		Died in Institution	2	...	...	...	...	...	...	...	...	...	...	2
	Class T.B. plus. Group 1.	Quiescent ... ..	...	...	...	...	1	...	...	...	...	...	...	1
		Improved	3	1	...	5	3	...	...	1	...	...	...	13
		No material improvement	1	2	...	1	2	...	1	...	...	...	...	7
		Died in Institution	...	1	...	...	...	...	...	...	...	...	...	1
	Class T.B. plus. Group 2.	Quiescent ... ..	...	...	...	...	1	...	...	...	...	...	...	1
		Improved	6	2	...	9	3	...	2	...	...	1	...	23
		No material improvement	6	5	...	3	2	...	2	...	...	...	...	18
		Died in Institution	4	2	...	...	...	...	...	1	...	...	...	7
NON-PULMONARY TUBERCULOSIS.	Class T.B. plus. Group 3.	Quiescent ... ..	...	...	...	...	...	...	...	...	...	...	...	...
		Improved	1	1	...	8	1	...	...	...	...	...	...	11
		No material improvement	1	3	...	1	...	...	...	...	...	...	...	5
		Died in Institution	3	2	...	1	...	...	...	...	...	...	...	6
	Bones and Joints.	Quiescent or arrested	...	...	...	...	...	...	...	...	...	...	...	...
		Improved ... ..	...	...	...	...	...	...	...	1	...	1	3	5
		No material improvement	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution	...	...	...	...	...	...	...	...	...	...	...	...
	Abdominal	Quiescent or arrested	1	...	...	...	...	...	...	...	...	...	...	1
		Improved ... ..	...	2	...	...	...	1	...	...	...	...	...	3
		No material improvement	...	...	...	1	...	...	...	...	...	...	...	1
		Died in Institution	...	...	...	...	...	...	...	...	...	...	...	...
Other Organs.	Quiescent or arrested	...	...	...	...	...	...	...	...	...	...	...	...
	Improved ... ..	...	...	1	...	...	...	...	...	...	...	...	1	
	No material improvement	...	...	...	...	...	1	...	...	...	...	...	1	
	Died in Institution	...	...	...	...	...	...	...	...	...	...	...	...
Peripheral Glands.	Quiescent or arrested	...	...	...	...	...	...	...	...	...	...	...	...
	Improved ... ..	...	...	...	...	...	...	...	...	...	...	...	...
	No material improvement	...	...	...	...	...	...	...	...	...	...	...	...
	Died in Institution	...	...	...	...	...	...	...	...	...	...	...	...
			Under 1 week			1—2 weeks.			2—4 weeks.			More than 4 weeks.			Total
Observa- tion for purpose of diagnosis.	Tuberculous ... ..	...	...	...	...	...	...	...	1	...	...	...	...	1
	Non-Tuberculous	1	...	...	...	...	1	...	...	...	5	...	3	10
	Doubtful ... ..	...	...	...	...	...	...	...	...	...	1	...	...	1

(a) PULMONARY TUBERCULOSIS.

Annual Return showing in summary form the condition of all Patients whose case records are in the possession of the Dispensary (or Dispensaries) at the end of 1930, arranged according to the years in which the patients first came under Public Medical Treatment for pulmonary tuberculosis, and their classification as shown on Form A.

Condition at the time of the last record made during the year to which the Return relates.		Previous to 1926.				1926.				1927.				1928.				1929.				1930.									
		Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Cl. T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Cl. T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Cl. T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Cl. T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Cl. T.B. plus).					
ALIVE.	Discharged as cured.	M.	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		F.	74	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Children	M.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		F.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Disease arrested.	M.	3	5	4	2	11	4	1	2	...	3	2	2	1	...	3	3	...	2	...	2	...	...	...	...	
		F.	23	6	1	...	7	4	3	2	...	5	2	1	...	1	...	...	...	...	...	...	...	...	...
Disease not arrested.	M.	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
CONDITION NOT ASCERTAINED DURING THE YEAR.	M.	7	3	6	...	9	...	1	2	...	3	1	4	5	...	9	4	3	4	...	7	12	4	6	3	13					
	F.	5	2	7	...	9	2	...	...	...	...	...	2	4	...	6	15	6	1	...	7	15	9	5	...	14
LOST SIGHT OF OR OTHERWISE REMOVED FROM DISPENSARY REGISTER.	M.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
DEAD.	M.	...	6	8	19	33	1	3	6	30	39	...	...	...	...	22	2	2	...	23	25	2	...	8	11	19	
	F.	...	...	...	...	22	...	...	7	16	23	...	...	...	...	15	...	1	3	12	16	5	...	4	12	18
TOTALS	M.	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
	F.	1	...	...	...	...	...	...	...	2	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
		324	31	34	30	95	54	13	26	49	88	7	9	13	37	59	23	13	10	36	59	36	15	24	27	66	45	6	21	16	43

(b) NON-PULMONARY TUBERCULOSIS.

Annual Return showing in summary form the condition of all Patients whose case records are in the possession of the Dispensary (or Dispensaries) at the end of 1930, arranged according to the years in which the Patients first came under Public Medical Treatment, and their classification as shown on Form A.

Condition at the time of the last record made during the year to which the Return relates.		Previous to 1926.					1926.					1927.					1928.					1929.					1930.				
		Bones and Joints.	Abdominal.	Other Organs	Peripheral Glands	Total.	Bones and Joints.	Abdominal.	Other Organs	Peripheral Glands	Total.	Bones and Joints.	Abdominal.	Other Organs	Peripheral Glands	Total.	Bones and Joints.	Abdominal.	Other Organs	Peripheral Glands	Total.	Bones and Joints.	Abdominal.	Other Organs	Peripheral Glands	Total.	Bones and Joints.	Abdominal.	Other Organs	Peripheral Glands	Total.
ALIVE.	Discharged as cured.	Adults { M. F.	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Children { M. F.	...	...	...	20 15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Disease arrested.	Adults { M. F.	...	...	...	1	2	...	2	...	4	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Children { M. F.	1 1 1	2 3 2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Disease not arrested.	Adults { M. F.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Children { M. F.	2 1 1	1 15 10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TRANSFERRED TO PULMONARY		...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
CONDITION NOT ASCERTAINED DURING THE YEAR.		2	...	2	1	5	...	...	1	2	3	2	...	1	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
LOST SIGHT OF OR OTHERWISE REMOVED FROM DISPENSARY REGISTER.		1	...	...	18	19	1	...	1	1	3	1	...	...	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...
DEAD.	Adults { M. F.	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Children { M. F.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS		12	4	13	87	116	5	1	6	5	17	21	5	4	12	42	9	8	6	7	30	7	6	7	3	23	8	7	2	5	22

SANATORIUM TREATMENT.

The present Sanatorium accommodation for Smethwick patients is:—

	Romsley.	Knightwick.	Holly Lane.
Men	10	1	12
			(Excluding Chalets).
Women	10	1	10
Children	—	—	At expense of male and female beds only.

The length of time, in weeks, that patients have had to wait for admission to these beds is shown in the following table:—

LENGTH OF WAIT FOR ADMISSION TO SANATORIUM, IN WEEKS (FROM DATE OF DOCTOR'S RECOMMENDATION TO DATE OF ADMISSION)— PULMONARY CASES ONLY.

MEN.

	1923	1929	To 31/3/30.
For Romsley, Knightwick, etc.	2.43	2.70	5.33
For Holly Lane	1.53	1.19	1.69
	<hr/>	<hr/>	<hr/>
For all male admissions	2.06	1.88	3.64

WOMEN.

	1928	1929	To 31/3/30.
For Romsley, Knightwick, etc.	1.40	2.70	1.00
For Holly Lane	1.45	1.19	1.00
	<hr/>	<hr/>	<hr/>
For all female admissions	1.40	1.88	1.00

This table shows the average times for waiting. A wait of five weeks in the case of a man who has just been diagnosed is a long time. During these five weeks the man is away from work and literally waiting for his treatment to begin, or so it seems to him. Before his time comes he may begin to feel a little better and by the time his turn does come he may refuse to go away, saying he feels he will be fit for his work in another week or so.

In this way the chance of early treatment in a few cases slips through our fingers. It would not be economical to keep a superfluity of beds waiting empty for such cases, but it would be well to recognise the advisability of allowing the Tuberculosis Officer, when his waiting list for Sanatoria gets too long, to draft off a few cases to any other recognised Sanatorium where he can obtain beds temporarily. As a matter of fact, the Council have recognised this already in several instances. The table shows that the supply of beds for women is adequate. The supply for men is inadequate, but by drafting off a surplus at times of pressure, it might then be regarded as adequate. There is no provision made for children at all, and this is unfortunate.

In a Special Report presented to the Health Committee in the middle of 1930, it was stated that the number of patients on the Dispensary Register at the end of March, 1930, was 495. This does not include all the people in Smethwick suffering from Tuberculosis, but only those who attended for Public Medical Treatment and who were alive on March 31st, 1930. The Dispensary-Register does not include the names of all Tuberculous patients, because for various reasons some do not attend, nor does the above figure include the list of suspected cases (cases referred for diagnosis, etc.). All cases that are cured, transferred or die, have their names removed, and all new attendances have their names added, so that the Register has a constantly varying list of names on it.

Of the present total of 495, 95 are Non-Pulmonary cases and the remainder are Pulmonary. The majority of the Non-Pulmonary cases are either Tuberculosis of Bones and Joints, or of Peripheral Glands. Patients suffering from the former are dealt with by the 'Cripples' Union in Smethwick, subsidised by the Local Authority; patients suffering from Tuberculosis of the Peripheral Glands are mostly children.

Cases of Pulmonary Tuberculosis (after deducting all new cases in 1930, all deaths, cures and transfers in 1929 and 1930) are divisible into two groups, Negative and Positive, the latter being divisible again into three groups, thus:—

Negative	...	...	...	200
<hr/>				
Positive:—				
Group 1.	...	...	...	57
Group 2.	...	...	...	56
Group 3.	...	...	...	10
				<hr/>
				123
				<hr/>

Negative cases have never at any time had Tubercle Bacilli detected in their Sputum, whilst Positive cases have had Tubercle Bacilli detected at least on one occasion. Of the cases who were alive on the 31st December, 1929, the numbers for each division are given in the table above. The further sub-division of the Positive cases is simply a measure of the amount of lung involvement.

The number of new cases added each year may be gauged from the following table:—

NOTIFICATIONS RECEIVED			DEATHS.			DEATH RATE 1000 POPULATION.		
	Pulmon- ary	Other Forms.	Pulmon- ary	Other Forms	Total	Pulmon- ary.	Other Forms.	Total.
1912	307	—	69	29	98	0.9	0.2	1.1
1913	318	50	64	20	84	0.8	0.1	0.9
1914	143	167	84	14	98	1.26	0.19	1.45
1915	229	103	79	15	94	1.10	0.21	1.31
1916	204	117	91	12	103	1.20	0.15	1.35
1917	206	126	103	6	109	1.30	0.05	1.35
1918	194	80	97	11	108	1.43	0.16	1.59
1919	260	60	87	9	96	1.19	0.12	1.31
1920	146	31	62	24	86	0.81	0.31	1.12
1921	88	14	53	17	70	0.68	0.22	0.90
1922	112	17	61	25	86	0.78	0.32	1.10
1923	80	18	73	14	87	0.93	0.17	1.10
1924	110	18	53	14	67	0.67	0.17	0.94
1925	74	24	61	19	80	0.77	0.24	1.01
1926	94	16	61	8	69	0.79	0.10	0.89
1927	87	38	65	4	69	0.84	0.05	0.89
1928	73	25	59	9	68	0.69	0.10	0.79
1929	108	34	81	11	92	0.93	0.13	1.06

The high figures for 1929 are exceptional and are due mainly to the influenzal epidemic of 1928-29, and to the cold spell of Spring 1929, which proved very trying to all types of patients suffering from any form of respiratory disease.

This table shows that between 60 and 90 new cases of Pulmonary Tuberculosis may be expected each year for some years to come yet. Most of these cases are early ones and eminently in need of Sanatorium treatment. For purposes of comparison the table of deaths occurring from Tuberculosis is given also. The number of beds that a Local Authority should provide for Sanatorium treatment of Tuberculosis is 1 per 2,500 of the population, according to a Ministry recommendation. In Smethwick this would mean 34 beds. Half of these, it is recommended, should be for early cases, and half for advanced. The recommended figure is low, and is exceeded by most progressive authorities at the present time.

THE DIFFERENCE BETWEEN NEGATIVE AND POSITIVE CASES OF PULMONARY TUBERCULOSIS.

The presence of Tubercle Bacilli in the sputum always indicates activity of the disease. A persistently negative case means, *prima facie*, one in which the disease never proceeded so far as to cause Tubercle Bacilli to appear in the sputum. Obviously the outlook for negative cases is better than for positive cases, other things being equal. The following table will exemplify this:—

(Table showing year of Notification of all patients alive on
31st December, 1929, showing also the numbers who have
had Sanatorium treatment and those who have not).

Year	POSITIVE.			NEGATIVE.		
	Sanatorium.	Non-Sanatorium.		Sanatorium.	Non-Sanatorium	
1914	2	—	...	13	3	
1915	—	—	...	6	—	
1916	—	1	...	6	—	
1917	—	—	...	6	3	
1918	3	—	...	5	2	
1919	7	—	...	13	2	
1920	4	—	...	11	—	
1921	2	—	...	2	—	
1922	4	—	...	10	2	
1923	1	—	...	4	2	
1924	5	—	...	10	3	
1925	3	—	...	4	1	
1926	13	2	...	8	2	
1927	12	—	...	7	8	
1928	20	5	...	12	13	
1929	28	11	...	24	18	
	—	—	...	—	—	
	104	19	...	141	59	
		—	...		—	
		123	...		200	

Of the 323 Pulmonary cases of Tuberculosis now on the Dispensary Register (after deducting all new cases in 1930, all deaths, cures and transfers in 1929 and 1930), the above table shows their year of first coming on the Register. The number of negative cases who have survived from the earlier years greatly exceeds the number of positive cases. If a line be drawn under the figures for the year 1925, and the numbers above this line only be studied, this fact will be brought out more forcibly, for then it will be seen that 108 negative cases have survived to the end of 1925 as compared with 32 positive cases. This is more striking still when it is borne in mind that in any one year as many positive cases are notified as negative, in fact usually more. In considering treatment of Pulmonary Tuberculosis cases, and prevention of the infection of the patients' families, particular attention must be paid to positive cases.

PUBLIC HEALTH (PREVENTION OF TUBERCULOSIS) REGULATIONS, 1925.

It was not necessary to take action under these regulations during the year.

PUBLIC HEALTH ACT, 1925, SECTION 62.

The Council provide beds for advanced cases at Holly Lane Hospital, but in no case was it found necessary to apply for an Order for the Compulsory removal of a patient to hospital. It is found, however, that the possession of the powers of compulsory removal is of considerable value, though it is seldom that these powers have to be called into operation.

AFTER-CARE WORK.

After-care work has been carried out by the Staff at the Chest Clinic and the following is a summary of the work done during the year:—

Patients receiving loan of beds and bedding	16
Patients receiving loan of shelters, including beds ...	13
Advanced cases on domiciliary treatment receiving loans of bed-pans, air-cushions, etc.	65
Cases receiving grants of milk	115

HOME NURSING AND EXTRA NOURISHMENT.

In 115 cases, extra nourishment in the form of grants of milk was given during the year, as against 51 cases in 1929.

DENTAL TREATMENT.

By arrangement with the Education Committee the services of one of the school dentists is available for the dental treatment of tuberculous patients. Under this scheme 25 patients were dealt with during the year, the majority being seen at Holly Lane Hospital.

RECREATION.

Contributions of books, periodicals, etc. for the patients' library will be welcomed from anyone reading this report. Through the kindness of Mr. H. V. Worwood and the Smethwick Insurance Committee, newspapers and periodicals are supplied to the patients at Holly Lane.

During a year a Maestrophone Radio-Gramophone was installed in the Hospital. This instrument is worked direct from the mains and is situated in and controlled from the Administration Block. The various wards are wired throughout and a dozen loud-speakers are placed in suitable positions in A. B. C. and D. Blocks and in the recreation rooms.

Venereal Diseases.

By arrangement, treatment is available for Smethwick patients at the General Hospital, Birmingham. The Centre is open on the following days:—

MEN:	Mondays	} 10 a.m.—12 noon and 5.15 p.m.—7.15 p.m.
	Wednesdays	
	Fridays	
	Thursdays	
	Tuesdays:	5.15—7.15 p.m.
	Saturdays:	10—12 a.m.
WOMEN:	Mondays &	} 5.15—7.15 p.m.
	Thursdays	
	Tuesdays &	} 10 a.m.—12 noon.
	Fridays	

Subject to adjustment from time to time to meet additional demands.

The number of Smethwick residents dealt with at the Centre during the year was 110, compared with 111 last year, 82 in 1928, 85 in 1927, 83 in 1926, 89 in 1925, 64 in 1924, 61 in 1923, 74 in 1922, 73 in 1921, and 120 in 1920.

The Report of the Medical Officer of the Treatment Centre for the year under review shows:—

- A. Number of Smethwick patients dealt with during the year, at or in connection with the Out-Patient Clinic for the first time, and found to be suffering from:—

Syphilis	...	...	...	...	17
Soft Chancre	...	...	...	...	—
Gonorrhœa	...	...	...	...	55
Conditions other than Venereal	...	...	...	...	38
Total					110

- B. Total number of attendances at the Out-Patient Clinic of all patients residing in Smethwick ... 4,748
- C. Aggregate number of "In-patient days" of all patients residing in Smethwick ... 204
- D. Number of doses of Arseno Benzene Compounds given ... 882

Pathological examination made during the year 1930 relating to patients residing in Smethwick:—

For detection of Spirochetes	...	...	25
For detection of Gonococci	...	...	396
Cultures	...	...	365
For Wasserman Re-action	...	...	236
Urines (Microscopical)	...	...	4
Blood, Complement Fixation Test	...	...	57
Blood, Van-den-berg Test	...	...	175
Urines Chemical	...	...	134
Cerebro Spinal Fluid, Cell Count	...	...	8

Total ... 1,400

General Provision of Health Services in the Borough.

HOSPITALS PROVIDED OR SUBSIDISED BY THE LOCAL AUTHORITY.

(1) TUBERCULOSIS :—

Holly Lane Hospital, Smethwick. 22 beds for advanced and chronic cases, and 12 beds in chalets.

Romsley Hill Sanatorium, near Halesowen. (Birmingham Corporation). 20 beds reserved for Smethwick patients.

King Edward VII. Memorial Sanatorium, Knightwick, near Worcester. Two beds reserved for Smethwick patients.

For Surgical Tuberculosis: Cases are sent to "The Woodlands," Northfield; "The Forelands," Bromsgrove, or the Shropshire Orthopædic Hospital.

(2) MATERNITY :—

Two beds reserved for cases of Puerperal Fever at the Women's Hospital, Sparkhill, Birmingham.

Under an Agreement between the Smethwick Corporation and the City of Birmingham, Smethwick patients are received in Dudley Road and Selly Oak Hospitals for maternity treatment, on the recommendation of the Medical Officer of Health. The Borough Treasurer collects from the patients such amounts towards the cost of treatment as the circumstances allow, according to a scale approved by the Council.

(3) CHILDREN.

The Council make an annual contribution of £10 10s. 0d. to the Children's Hospital, Birmingham, in respect of the treatment of Tonsils and Adenoids in pre-school children.

(4) FEVER :—

Smethwick and Oldbury Joint Isolation Hospital, Holly Lane, Smethwick (total 60 beds). Diphtheria and Scarlet Fever cases only.

(5) SMALLPOX :—

South Staffordshire Joint Smallpox Hospital, Moxley, near Wednesbury.

INSTITUTIONAL PROVISION FOR UNMARRIED MOTHERS, ILLEGITIMATE INFANTS, AND HOMELESS CHILDREN :—

None at present.

AMBULANCE FACILITIES :—

- (a) For Infectious Cases: Smethwick and Oldbury Joint Hospital Committee have a motor ambulance, which is kept at the Isolation Hospital, Holly Lane, Smethwick. (Telephone: Smethwick 0159).
- (b) For Non-Infectious and Accident Cases: Town Ambulance kept at the Fire Station, Rolfe Street, Smethwick. (Telephone: Smethwick 0022).

CLINICS AND TREATMENT CENTRES.**INFANT WELFARE CENTRES :—**

There are eight Infant Welfare Centres in the Borough, and sessions are held on the following days from 2 to 4.30 p.m., with the exception of Cape Centre.

- No. 1. Baptist Hall, Rawlings Road. Mondays and Wednesdays.
- No. 2. 95, Soho Street. Tuesdays and Thursdays.
- No. 3. St. Stephen's Hall, Sydenham Road. Wednesdays.
- No. 4. The Firs Clinic, Coopers Lane. Tuesdays.
- No. 5. Congregational Church Hall, Oldbury Road. Fridays.
- No. 6. St. Gregory's Hall, Wigorn Road. Fridays.
- No. 7. St. Chad's Hall, Shireland Road. Wednesdays, 9—12.30 p.m.
- No. 8. St. Mark's Church, Warley Road. Thursdays.

ANTE-NATAL CLINIC :—

Held at The Firs Clinic, Coopers Lane on Monday and Thursday afternoons from 2 to 4.30 p.m., on Wednesday and Thursday mornings from 9.30 to 12 a.m. and on Wednesday evening at 6 p.m.

SCHOOL CLINICS :—

Two School Clinics are provided, one at 95, Soho Street, Six Ways, and one at The Firs Clinic, Coopers Lane. The days and times of attendance are as follows :—

Treatment Clinics :—

Six Ways: Daily, (except Saturday), mornings only.

The Firs: Tuesday, Wednesday, Thursday and Friday mornings.

Inspection Clinics :—

Six Ways: Tuesday and Friday mornings.

The Firs: Tuesday morning.

EYE CLINIC :—

The Firs Clinic: Monday, 9.30 to 12.30 and 2 to 5 p.m., and Thursday, 2 to 5 p.m.

IONISATION CLINIC :—

Six Ways: Tuesday morning, 9.30 to 12.30 p.m.

CLEANSING STATION (for Scabies, etc.):—

Six Ways: Monday and Wednesday afternoons.

DENTAL CLINICS:—

The Firs: Daily, from 9.30 to 5, except Tuesday and Thursday afternoons.

High Street: Daily from 9.30 to 5 except Wednesday afternoon.

CHEST CLINIC:—

The Firs: Tuesday from 7 to 9 p.m., Wednesday from 2.15 to 5 p.m. and Friday from 11 to 1 p.m. New cases seen by appointment only.

ULTRA-VIOLET LIGHT CLINIC:—

The Firs: Monday from 9 to 1 p.m. and Friday from 2.15 to 5 p.m. Tuesday evening from 6 to 8 p.m. Additional sessions as required.

X-RAY EXAMINATIONS:—

At the Firs Clinic by appointment.

PROFESSIONAL NURSING IN THE HOME:—

- (a) *General*: The Smethwick District Nursing Association, The Edward Cheshire Nurses' Home, Bearwood Road, Smethwick, has a nurse-matron and two nurses, who undertake general nursing among the poorer inhabitants in the district. A grant of £25 per annum is made to the Association by the Council for emergency nursing of cases of Ophthalmia Neonatorum when for some reason the nurses of the Health Department cannot attend.
- (b) *Infectious Diseases*: A panel of Home Helps, who will be valuable for services in cases of infectious diseases, is being formed.

MIDWIVES:—

Twenty midwives reside in the Borough, and a total of 35 notified their intention to practice in the area during the year.

In 1921 two midwives were trained and these with a third, already trained, were subsidised by the Council for a period of twelve months. No midwife is at present receiving a subsidy from the Council.

CHEMICAL WORK:—

This work is undertaken by the Public Analyst for the Borough.

Other Institutions available for the District.

GENERAL HOSPITAL, STEELHOUSE LANE, BIRMINGHAM :—

Out-patients' Department open daily at 9 a.m.

QUEEN'S HOSPITAL, BATH ROW, BIRMINGHAM :—

Out-patients' Department open daily at 9 a.m. (except Saturday).

CHILDREN'S HOSPITAL, LADYWOOD ROAD, BIRMINGHAM :—

For children under 12 years of age. Daily from 1-30—2-30 p.m.
(except Saturday).

WOMEN'S HOSPITAL, SPARKHILL, BIRMINGHAM :—

(Out-patients' Department, Upper Priory, Birmingham). Daily
(except Saturday) from 1—2 p.m.

EYE HOSPITAL, CHURCH STREET, BIRMINGHAM :—

Out-patients' Department open daily from 8.30—9.30 a.m.

SKIN AND URINARY HOSPITAL, JOHN BRIGHT STREET, BIRMINGHAM :—

Out-patients' Department open daily at 1.30 p.m. (except Saturday).

EAR, NOSE AND THROAT HOSPITAL, EDMUND STREET, BIRMINGHAM :—

Out-patients' Department open daily 9-30—11 a.m.

ROYAL CRIPPLES' HOSPITAL, BROAD STREET, BIRMINGHAM :—

Out-patients' Department open daily (except Saturday) from 1-30—
2-30 p.m.

DENTAL HOSPITAL, GREAT CHARLES STREET, BIRMINGHAM :—

Daily from 9—10-15 a.m.

HOMOEOPATHIC HOSPITAL, EASY ROW, BIRMINGHAM :—

Out-patients' Department open daily 9 a.m.—5 p.m. except Satur-
days, 9—1 p.m.

MATERNITY HOSPITAL, LOVEDAY STREET, BIRMINGHAM :—

Out-patients are seen on Monday, Wednesday, Thursday and Satur-
day at 9 a.m., and Tuesday and Friday at 1.45 p.m.

THE BIRMINGHAM GENERAL DISPENSARY has a branch at Cape Hill,
Smethwick—surgery hours, 2—4 p.m. daily (except Wednesday).

Local Acts, Bye Laws, etc., relating to Public Health, in force in the County Borough of Smethwick.

LOCAL ACTS.

- Smethwick Corporation Act, 1901.
- Smethwick Corporation Act, 1927.
- Smethwick Corporation Act, 1929.

ADOPTIVE ACTS.

- Baths and Wash-houses Acts—Adopted 11th Sept., 1885.
- Infectious Diseases (Notification) Act, 1889.
- Infectious Disease (Prevention) Act, 1890—Adopted 10th Oct., 1890.
- Public Health Acts Amendment Act, 1890—Adopted 14th Nov., 1890.
- Private Street Works Act, 1892—Adopted 10th March, 1893.
- Public Health Acts Amendment Act, 1907—the following parts adopted 18th Feb., 1908—Part II., Sections 17 to 33; Part III., Sections 34 to 38, 45 to 47, 49 to 51; Part IV., Sections 52 to 66 and Section 68; Part V., the whole part; Part X., the whole part.
- Public Health Act, 1925—the following parts adopted 3rd May, 1926—Part II., Sections 13 to 33, and 35; Parts III., IV., and V., the whole parts.

BYE-LAWS.

- Street Cleansing and Nuisances, 1856.
- Slaughter-houses, 1893.
- Nuisances, 1914.
- Good Rule and Government, 1921.
- New Streets and Buildings, 1926.
- Nursing Homes, 1929.
- Smoke Abatement, 1930.

REGULATIONS.

- Dairies, Cowsheds and Milkshops, 1901.

INFANT MORTALITY DURING THE YEAR 1930.

CAUSE OF DEATH	Under 1 w'k.	1-2 w'ks.	2-3 w'ks.	3-4 w'ks.	Total under 4 w'ks.	1-2 m'ths	2-3 m'ths	3-4 m'ths	4-5 m'ths	5-6 m'ths	6-7 m'ths	7-8 m'ths	8-9 m'ths	9-10 m'ths	10-11 m'ths	11-12 m'ths	Total under 1 year
Meningococcal Meningitis	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1
Congenital Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Scurvy	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Rickets	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Septicemia	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Convulsions	1	...	1	1	2	1	...	1	...	...	...	...	...	...	...	...	3
Bronchitis	...	...	1	...	1	...	...	...	3	...	1	...	3	2	1	...	3
Broncho-pneumonia	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	12
Lobar-Pneumonia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Gastritis	...	...	...	...	...	1	1	...	...	3	1	1	...	...	...	...	7
Diarrhoea and Enteritis	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Impetigo	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Cong. Malformation of Heart	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2
Other Cong. Malformations	2	...	...	1	3	1	...	...	1	...	...	...	...	...	...	...	5
Debility, Marasmus	7	...	1	2	10	...	...	...	3	1	...	...	...	...	...	...	14
Premature Birth	35	2	3	...	40	...	...	...	...	...	...	...	...	...	...	...	40
Injury at Birth	4	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	4
Atelectasis	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3
Accidental Suffocation... (overlying)	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Totals	54	2	5	4	65	8	2	2	7	4	4	2	3	2	1	2	102

BIRTHS REGISTERED DURING THE YEAR { Legitimate 1,490.
Illegitimate 46.

DEATHS REGISTERED DURING THE YEAR { Legitimate 93.
Illegitimate 9.

Rate, 62.4.
Rate, 195.6.

Total 1,536.

Total 102.

Rate, 66.4.

MATERNITY AND CHILD WELFARE.

SUMMARY OF STATISTICS FOR THE YEAR 1930.

BIRTHS.

Registered: (1) Legitimate, 1,490; (2) Illegitimate, 46; (3) Total, 1,536.

Notified within 36 hours of birth:—

(1) Live Births, 1,193; (2) Stillbirths, 45; (3) Total, 1,238.

(1) By Midwives, 1,179; (2) By parents and doctors, 59.

In addition to this number particulars of 355 births notified to the Medical Officers of Health of adjoining areas, and relating to Smethwick residents, were transferred to this Office.

The number of stillbirths registered during the year was 72.

INFANT DEATHS.

Number: (1) Legitimate, 93; (2) Illegitimate, 9; (3) Total, 102.

Rate per 1,000 births: (1) Legitimate, 62.4; (2) Illegitimate, 195.6; (3) Total 66.4.

MATERNAL DEATHS.

Number of women dying in, or in consequence of, childbirth:—

(1) From Sepsis, 7; (2) From other causes, Nil.

The maternal death-rate is 4.5 per 1,000 births, compared with 5.2 in 1929, 4.2 in 1928, 3.0 in 1927, 4.8 in 1926, 4.8 in 1925, 4.4 in 1924, 6.9 in 1923, 1.7 in 1922 and 4.5 in 1921. The rate for England and Wales for 1929 was 4.33 per 1,000 births.

OPHTHALMIA NEONATORUM.

Number of cases notified, 21.

Cases treated by Health Department nurses, 15.

Cases treated at Birmingham and Midland Eye Hospital, 5.

Cases resulting in impaired vision, none.

Exudate from the eyes was examined in 9 instances and gonococci found in all cases.

Visits paid to cases of Ophthalmia Neonatorum by the nurses during the year, numbered 122.

Notifications for the past twelve years:—

1930	21	1924	27
1929	13	1923	31
1928	21	1922	32
1927	9	1921	34
1926	11	1920	61
1925	15	1919	43

MATERNAL MORTALITY.

During the year 1930 there were seven maternal deaths, all from sepsis. The mortality rate is therefore 4.5 per 1,000 births as against 5.2 the preceding year. The figures of the past five years are as below :—

1930	7
1929	8
1928	6
1927	4
1926	7

This continued high rate of maternal mortality is a matter of grave concern and it does not appear that the standard of midwifery service in the Borough is sufficiently uniformly high. Sepsis—the conditions from which all seven died in 1930—is not always due to faulty methods at the confinement, but it is usually so and one wonders how many of these women would have died had they been confined in a clean ward of a maternity home under skilled, cleanly and up-to-date supervision.

Thorough investigation is made in each case of death; in all cases the sad conclusion has been that the woman need not have died if . . . !

The satisfactory feature seems to be that in 1930 no woman lost her life through lack of adequate ante-natal care.

STILLBIRTHS.

The stillbirth rate for the year was 0.84 per 1,000 of the population as against 0.50 for the preceding year. It is unsatisfactory to note that there has been an increase instead of a decrease, but our experience seems to suggest that many of these are cases where the baby was unwanted. I am convinced that many parents rely on birth control appliances to prevent conception, not realising that there is no safe preventative, and as a result resort to abortion to get them out of their difficulty when conception does occur. It is noteworthy that the number of illegitimate births increased from 32 in 1929 to 46 in 1930.

INFANT DEATHS.

The number of deaths of infants under one year of age during the year was 102, a figure considerably lower than in 1929, when 121 babies died. The following shows the number of infant deaths in each of the four quarters of the year :—

1st quarter	36
2nd „	20
3rd „	28
4th „	18
	—
	102

The 102 infants who died during the year have been divided into two groups; those who attended one of our Welfare Centres, and those who did not attend. The table below shows that although approximately four-fifths of the babies in the Town attend an Infant Clinic, yet over 87 per cent. of the deaths occur from among the fifth who do not attend, and less than 13 per cent among those who do.

The figures are :—

INFANT DEATHS.

Did not attend Centre	...	...	89
Attended a Centre :—	...	...	13
			—
			102
			—

Of the 13 who attended a Welfare Centre, 6 or approximately half attended three times or less.—

4	attended once
1	„ twice
1	„ three times
1	„ four times
2	„ five times
4	„ more than 5 times.

HEALTH VISITORS.

In practice the Town is divided into nine districts, to each of which one Health Visitor is allotted. Her duties include :—

School visiting, attendance at medical inspection and following up certain cases until treatment is completed.

Attendance at the Infant Welfare Centre of her district, and the home visiting of children who are attending.

Routine visiting of new births notified.

Routine visiting of children from 1 to 5 years.

Attendance in rotation at the Cleansing Station.

Attendance at the Ante Natal Clinic.

Visiting expectant mothers.

Visiting and treatment of cases of Ophthalmia Neonatorum.

Routine inspection of midwives.

Investigation of applications for grants of milk in necessitous cases.

Visiting in connection with non-notifiable infectious diseases, i.e., Measles, Whooping Cough, Chickenpox, etc.

Visiting of Public Assistance Cases, Boarded-out Children, and Children's Act cases.

The total number of visits paid by the Health Visitors during the past three years is as follows :—

1928	29,998	1929	26,415	1930	32,974
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INFANT WELFARE CENTRES.

During the year 1930, there were no material changes in the various welfare centres, and the attendances continue year by year to increase. The two most recently opened centres are those at St. Chad's, Shireland Road (Cape Centre), and St. Mark's Londonderry. The Cape Centre

is the only morning session held (Wednesday morning) and has increased in size very slowly. The attendances for 1930, however, have reached an average of 40 per session as against 35 for the preceding year. The Londonderry Centre was opened in November, 1929 and in its first year attained an average of 44, which is very satisfactory indeed. During the first quarter of 1931 these attendances had increased to an average of 65 and Londonderry Centre is now classed as one of our best attended centres. Warley centre, with its average attendance of 81 per session heads the list in point of numbers.

There are now eight Centres in the Borough, two of which are open on two half-days per week, and six on one-half day per week. In addition, the Ante-Natal Clinic is open five half-days per week, making a total of 15 sessions weekly. A lady Medical Officer attends at each session, and the Health Visitor for the district is in charge of the Centre, assisted by a second nurse and voluntary workers.

The average weekly attendance during the year was 522, compared with 496 in the previous year and 446 in 1928. The names of 1391 children were added to the rolls during the year, compared with 1514 in the previous year, and 1306 in 1928.

The days and times of meeting, and the average attendance at each Centre are set out below:—

Centre.	Day and Time of Meeting.	Average Attendance.		
		Under 1 year.	1—5 years.	Total.
1. Rawlings Road	... Monday, 2 p.m.	31	34	65
Ditto	... Wednesday, 2 p.m.	28	30	58
2. 95, Soho Street	... Tuesday, 2 p.m.	21	20	41
Ditto	... Thursday, 2 p.m.	29	29	58
3. Sydenham Road	... Wednesday, 2 p.m.	28	23	51
4. Firs Clinic	... Tuesday, 2 p.m.	32	30	62
5. Oldbury Road	... Friday, 2 p.m.	27	26	53
6. Warley	... Friday, 2 p.m.	45	36	81
7. Cape	... Wednesday, 9-30 a.m.	16	24	40
8. Londonderry	... Thursday, 2 p.m.	25	19	44

The total attendances at the Centres during the year was 27,170, against 25,783 last year, and 23,224 in 1928.

The majority of the mothers bring their babies to the Centres quite regularly and take a very keen interest in the progress and well-being of their infants. Dried milk, cod liver oil, etc., is available at all the Centres at cost price, but no mother is allowed to purchase food unless it is prescribed by the doctor and the name, amount and date written on the weight card.

VOLUNTARY WORKERS.

Our very best thanks are due to the ladies who assist at the Centres. They attend most regularly and are always ready to give whatever help is required. Their work is of great value to the town.

EXAMINATION OF TODDLERS.

It has been generally found that while children up to the age of 12 months are fairly regularly brought to the Clinics, attendances during subsequent years fall off rapidly, and comparatively few children attend between two and five years. Furthermore, School Medical Inspection records show about one out of every four children who attend the Elementary Schools is found, at the first medical examination, to be suffering from some disease or defect which requires treatment, and these defects which are preventable or curable at an early age, usually develop between the ages of two and five. The ideal remedy for this state of affairs is the provision of nursery schools, but while we may, I hope, look forward in the near future to one or more nursery schools in Smethwick, the provision of sufficient nursery schools for all such children is not a practical proposition in the immediate future. To bridge the gap between two and five years, a scheme was put into operation in January, 1929, to secure examination of these children at an intermediate age. The age chosen was four years, and as each child attains the age of four years, a note is sent to the parent inviting him or her to bring the child to the nearest Infant Welfare Clinic, for a routine medical examination. A definite appointment at a definite place is offered in each case, and the examination given is on the lines of the school medical inspection. Defects found at these inspections are followed up, and treatment offered in the same way and by the same staff as the ordinary school cases. The results of our efforts during the year are as below :—

INSPECTION OF TODDLERS, 1930.

			Referred for			
			Called up	Examined	Treatment	Treated
1st quarter	...	...	203	108	38	24
2nd „	...	...	223	86	27	14
3rd „	...	...	203	96	37	15
4th „	...	...	217	105	48	27
			<hr/> 846	<hr/> 395	<hr/> 150	<hr/> 80

ANTE-NATAL CLINICS.

The attendances at the Ante-Natal Clinics continue to increase in a very gratifying manner. The number of weekly sessions was increased from four to five in July, 1930 with the result that the numbers steadily increased throughout the year. The attendances are restricted to expectant and nursing mothers, and visits from those who should attend our ordinary Infant Welfare Centres are excluded.

Since the establishment of the first Ante-Natal Clinic in 1920, the total attendances have been as follows :—

1920	42	1925	537
1921	107	1926	1,015
1922	127	1927	1,079
1923	241	1928	1,465
1924	275	1929	2,253
		1930	3,760

In 1930, the attendances represented 67 per cent. of all births registered in Smethwick, including babies born in the area of outside authorities, and 83.1 per cent of all the births notified in the Borough.

In addition to the Ante-Natal Clinics, two Breast-Feeding Clinics are held weekly at the Firs Clinic, Coopers Lane on Thursday and Saturday morning. During 1930 there were 394 attendances.

MIDWIVES.

During the year 35 midwives gave notice of their intention to practice in the area; of these 26 were trained and 9 were bona-fide midwives.

A total of 981 births were attended solely by midwives, being 79.2 per cent. of the births notified.

Each midwife has now an ante-natal register in which she keeps a record of any ante-natal work done by herself. The majority of the midwives are endeavouring to keep this register, but say that they continue to have some difficulty in getting mothers to submit to ante-natal examination. Every midwife is urged to send as many as possible of her cases to the Ante-Natal Clinic, and she receives a written report and advice upon each case from the Medical Officer. If it is found necessary to send a midwife's case to hospital for confinement, the midwife receives a fee of one guinea as compensation for the loss of her case. The number of such fees paid during the year was 10.

It will be noted that 35 midwives attended 981 confinements, representing an average of 28 per midwife. The usual fee charged by the midwife for her services is about 30/- per case, and, therefore, the average earnings of each midwife are about £40 per annum, a totally inadequate income for a professional woman.

The number of cases in which medical aid was summoned by midwives, was 302 as against 226 the previous year. The doctor's fees were paid by the Corporation in 265 cases. Of these 265 cases, 160 were insured under the Council's scheme, by which an expectant mother on payment of 5/- before the seventh month of pregnancy, may insure against the possibility of a doctor being called in. One effect of the scheme undoubtedly has been that the midwife has been more inclined to call in medical aid in doubtful cases where she knows that it will not result in more expense to her patient. This has prevented the insurance scheme from being a financial success, but it has its compensations. The doubtful cases in the past received no medical help; under the present scheme they do, and as the whole scheme was primarily conceived to provide better midwifery and reduce maternal morbidity and mortality, and not to make a profit, I consider that the loss under the new conditions represents a really useful expenditure of money. It may, however, be necessary at a later date to revise the rate of payment by the mother.

The increased number of cases in which medical help has been summoned is not entirely accounted for by the Insurance Scheme. Apart from the latter, the general standard of midwifery demanded to-day is higher than it was, and midwives are encouraged to call in a doctor freely in cases where previously the condition was not considered important, such as slight perineal tears, etc. The inspection of the midwives

by this Department is now more complete than it has been, and the midwife is constantly being taught the importance of details which she had neglected in the past. The net result should be an all round increase in the efficiency of the midwifery service, to the great benefit of the mothers.

The number of cases in which medical aid was summoned by midwives during the past three years was as follows:—

1928	180	1929	226	1930	302
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The complications for which medical aid was sought were as follows:—

MOTHER:—	Torn perineum	66
	Obstructed labour	...	...	...	...	...	10
	Prolonged labour	...	...	...	...	...	50
	Breech presentation	...	...	...	...	...	14
	Abnormal presentation	...	...	...	...	...	20
	Placenta prævia	...	...	...	...	...	2
	Adherent Placenta	...	...	...	...	...	15
	Miscarriage	...	...	...	...	...	4
	Inertia	...	...	...	...	...	4
	Hæmorrhage	...	...	...	...	...	10
	Vomiting	...	...	...	...	...	1
	Rise of temperature	...	...	...	...	...	13
	Eclampsia	...	...	...	...	...	1
	Other causes	...	...	...	...	...	22
CHILD:—	Feebleness	...	...	...	...	...	11
	Pemphigus	...	...	...	...	...	1
	Discharging eyes	...	...	...	...	...	33
	Premature birth	...	...	...	...	...	12
	Jaundice	...	...	...	...	...	—
	Convulsions	...	...	...	...	...	2
	Other causes	...	...	...	...	...	11
	Routine visits paid to midwives	...	...	...	...	...	122
	Number of notices received re:—						
	Intention to practice	...	...	...	...	...	35
	Sending for Medical Help	...	...	...	...	...	302
	Attendance at Stillbirths (under C.M.B. Rules)	...	...	...	...	...	14
	Attendance at Stillbirths (under Notification of Births Acts)	...	...	...	...	...	43
	Cessation of Breast Feeding	...	...	...	...	...	4
	Liability to be a Source of Infection	...	...	...	...	...	4
	Laying out Dead Body	...	...	...	...	...	—
	Death of Child	...	...	...	...	...	2

NURSING HOMES (REGISTRATION) ACT, 1927.

Only one Maternity Home was registered during the year. This home was inspected and found to be generally satisfactory.

SUPPLY OF MILK TO EXPECTANT AND NURSING MOTHERS
AND YOUNG CHILDREN. (MATERNITY AND CHILD
WELFARE ACT, 1918).

The administration of the scheme was continued on the same lines as in previous years, and entailed a considerable amount of work in the Department. The number of cases dealt with shows an increase of 13 over the previous year, the average duration of cases rose from 11 weeks to 13 weeks, the total cost being relatively higher.

Grants of milk at reduced price are made to :—

- (a) Nursing mothers who are actually suckling their infants.
- (b) Expectant mothers during the last two months of pregnancy.
- (c) Children up to three years of age.
- (d) Exceptionally to children from 3 to 5 years on the certificate of the doctor ;

in cases where the family income (after deducting the rent) falls below a certain limit.

The quantity supplied does not ordinarily exceed one pint per eligible person per day, but in exceptional cases of infants from 3 to 18 months, 1½ pints may be supplied on the certificate of the doctor. In certain cases on the recommendation of the Medical Officer at the Infant Welfare Centres, dried milk is supplied in lieu of fresh milk. Orders are granted for 28 days in the first instance, and applications reviewed each month.

Cases receiving assistance during the year : 251.

	1930	1929
Total Cost	£255 5 4	£222 14 6
Average cost per case	1 0 4	18 8
Average duration of case	13 weeks	11 weeks

ARTIFICIAL LIGHT TREATMENT.

During the period under review 595 individual cases received treatment at the Light Clinic, as follows:—

Tuberculosis cases	...	...	...	...	...	48
Maternity and Child Welfare cases:—						
(a) Expectant and Nursing Mothers	...	...	...	...	...	56
(b) Babies and Toddlers	...	...	...	...	...	205
Children of School Age	...	...	...	...	...	286
Total						595

These patients made a total of 8,574 attendances during the year:—

Tuberculosis cases	...	...	...	...	...	982
Maternity and Child Welfare cases:—						
(a) Expectant and Nursing Mothers	...	...	...	...	...	570
(b) Babies and Toddlers	...	...	...	...	...	2,368
Children of School Age	...	...	...	...	...	4,654
Total						8,574

The above figures compare with 836 cases and 10,989 attendances for the year ended 31st December, 1929 and 1,128 cases and 17,566 attendances for the year 1928.

The following tables show the classes of case treated during the year, together with a summary of results.

TABLE I.—TUBERCULOSIS CASES.

DISEASE.	Total Cases Treated	Number Discharged	CONDITION ON DISCHARGE				Continuing Treatment.
			Very much Improved	Improved	In Status Quo.	Course not completed.	
Abdominal	11	9	1	3	1	4	2
Bones and Joints	2	...	...	...	...	...	2
Lupus	5	4	...	4	...	...	1
Peripheral Glands	20	18	6	9	1	2	2
Pre-tubercular	5	4	...	3	1	...	1
Pulmonary	2	5	1	2	1	1	...
Total	48	40	8	21	4	7	8

TABLE II.—MATERNITY AND CHILD WELFARE CASES.

DISEASE.	Total Cases Treated.	Number Discharged	CONDITION ON DISCHARGE.				Continuing Treatment.	
			Very much Improved	Im- proved	In Statu Quo	Course not com- pleted.		
(a) Expectant & Nursing Mothers:								
Ante-Natal (Normal Cases)	11	11	...	10	...	1	...	
Bronchitis	1	1	...	1	...	...	...
Debility	2	2	...	2	...	...	...
Difficulty in breast-feeding	40	39	...	38	...	1	1	
Post Natal	2	2	1	1	...	...	...
Total ...	56	55	1	52	...	2	1	
b) Babies and Toddlers :								
Adenitis	1	1	...	...	...	1	...
Anæmia	3	2	...	2	...	...	1
Bronchitis and "colds"	19	18	...	12	...	6	1	
Debility	54	53	1	32	...	14	1	
Delayed Dentition ...	14	12	...	9	2	1	2	
Nervous	2	2	1	1	...	...	...
Malnutrition	5	5	...	1	3	1	...	
Marasmus	1	...	...	...	...	...	1
Otorrhœa	1	1	...	1	...	...	...
Rickets	89	75	2	49	4	20	14	
Skin... ..	1	1	...	1	...	...	...
Whooping Cough ...	15	15	9	4	1	1	...	
Total ...	205	185	13	112	16	44	20	

TABLE III.—CHILDREN OF SCHOOL AGE.

DISEASE.	Total Cases Treated	Number Discharged	CONDITION ON DISCHARGE.				Continuing Treatment.
			Very much Improved	Improved	In Status Quo.	Course not completed.	
Abdominal and Gastritis ...	1	1	...	1	...	...	...
Adenitis	12	10	1	7	...	2	2
Alopecia	18	15	5	7	1	2	3
Anæmia	4	4	...	2	2	...	...
Blepharitis and other Eye Conditions...	7	5	...	3	...	2	2
Bronchitis	90	79	11	49	1	18	11
Chilblains	9	7	3	3	1	...	2
Chorea	4	4	...	3	1	...	...
Debility	92	82	2	64	2	14	10
Nervous	6	3	...	3	...	...	3
Pre-operation	1	1	...	...	...	1	...
Rheumatism	27	24	1	18	...	5	3
Skin	9	6	...	6	...	...	3
Whooping Cough ...	6	6	3	2	...	1	...
Total ...	286	247	26	168	8	45	39

REVIEW OF THE WORK OF THE LIGHT CLINIC SINCE ITS ESTABLISHMENT IN SEPTEMBER, 1924.

From September, 1924 when the first Ultra Violet Ray lamp was installed in the old Clinic behind the Council House, to the end of last December—a period of over six years—there were 64,326 attendances for this form of treatment, the various categories being as under:—

Tuberculosis cases	...	...	...	...	...	8,346
Maternity and Child Welfare cases:—						
(a) Ante-Natal	...	...	...	...	...	5,853
(b) Babies	...	...	...	...	...	18,446
Children of School Age	...	...	...	...	...	31,681
						<hr/>
Total	...	...	...	...	...	64,326
						<hr/>

The type of lamp used is a "K.B.B." Mercury Vapour Lamp. The average time for general baths is three minutes at three feet; the minimum dose in ordinary cases is two minutes at four feet, and the maximum about four minutes at two feet. The period of treatment is a first period of six weeks, and when this is insufficient a further period of six weeks is given; the patient being examined by the medical officer at the end of each period. Treatment is given as a rule twice a week.

The various attendances are divided up into groups and analysed in the tables.

In all there were 3,349 patients, comprising 288 cases of tuberculosis, 485 expectant and nursing mothers, 1,176 babies and toddlers, and 1,400 children of school age. (This last-named group was fully dealt with in the School Report).

TUBERCULOSIS.

Almost at the outset it was found that cases of pulmonary tuberculosis not only did not improve, but were adversely affected and consequently their treatment by artificial sunlight was soon discontinued. On the other hand, most other types of tuberculosis re-acted very favourably; diseased glands showed excellent results and the results in lupus were strikingly successful, only two cases out of 32 failing to show improvement. Our usual procedure in lupus cases is to combine local treatment from a "K.B.B." Uviator lamp with general light baths over a prolonged period. In most cases the improvement, while steadily maintained, is slow, and the average period of treatment extends over a year. Local application without general baths have not proved successful in our experience in lupus, and indeed in most conditions where local applications are indicated, the patient is usually given general light baths as well.

BABIES AND TODDLERS.

The best results in this group have been in children suffering from whooping cough and from children with rickets, the former in particular showing very excellent and encouraging results. The figures for bronchitis are not very informative, but our experience has been that

children suffering from acute, sub-acute or chronic bronchitis, which does not follow measles or whooping cough, do not usually materially improve; if any improvement is seen in such cases we feel that the results are rather post hoc than propter hoc. The moist bronchitis, or bronchiolitis which is such a common complication of measles and whooping cough usually clear up rapidly with ultra violet ray therapy.

EXPECTANT AND NURSING MOTHERS.

The results in this group of cases are rather indefinite. It is felt that the results are, on the whole, sufficiently encouraging to continue, but are by no means spectacular.

TABLES OF CASES TREATED SINCE THE ESTABLISHMENT OF THE LIGHT CLINIC IN SEPTEMBER, 1924

TUBERCULOSIS CASES.

Condition.	Total Cases.	Very much improved.	Improved	In Statu Quo or worse.	Course not completed.
Abdominal	35	4	14	7	10
Bones and Joints	21	5	9	6	1
Lupus	32	19	11	2	...
Other Organs... ..	22	5	8	8	1
Peripheral Gland	127	46	53	15	13
Pre-tubercular	15	...	6	9	...
Pulmonary	36	1	11	10	14
Grand Total	288	80	112	57	39

BABIES AND TODDLERS.

Condition	Total Cases.	Very much improved.	Improved	In Statu Quo or worse.	Course not completed.
Adenitis	29	4	19	1	5
Anæmia	12	...	10	...	2
Bronchitis & "colds"... ..	112	12	66	9	25
Chilblains	2	...	2	...	...
Debility	268	19	163	30	56
Delayed Dentition	61	15	30	9	7
Malnutrition	35	6	20	5	4
Marasmus	13	4	5	3	1
Nervous	12	2	8	...	2
Not Thriving	106	17	58	21	10
Otorrhœa	1	...	1	...	...
Paralysis	1	...	...	1	...
Pre and Post Operation	8	...	8	...	...
Rickets... ..	357	45	224	29	59
Skin	14	5	5	3	1
Whooping Cough	145	86	36	10	13
Grand Total	1,176	215	655	121	185

EXPECTANT AND NURSING MOTHERS.

Condition.	Total Cases.	Very much improved.	Improved	In Statu Quo or worse.	Course not completed.
Anæmia	28	1	17	9	1
Ante-Natal (normal cases)	162	...	127	12	23
Bronchitis	6	...	4	1	1
Chilblains	1	..	1	...	...
Debility	88	11	51	21	5
Difficulty in Breast-Feeding	162	13	131	5	13
Insomnia	22	5	11	5	1
Mastitis	3	2	...	1	...
Nervous	2	...	2	...	...
Post-Natal	10	2	5	3	...
Sciatica	1	...	1	...	...
Grand Total ...	485	34	350	57	44

SCHOOL CHILDREN.

Condition.	Total Cases.	Very much improved.	Improved	In Statu Quo or worse.	Course not completed.
Abscesses	2	2	...	...	...
Abdominal	3	...	1	1	1
Adenitis	109	20	66	8	15
Alopecia	61	19	27	7	8
Anorexia	41	3	28	4	6
Bronchitis, etc. ...	306	37	177	36	56
Chilblains	22	11	9	2	...
Chorea	65	26	29	8	2
Colitis	1	1	...	...	...
Debility	502	99	294	50	59
Eczema	10	9	...	1	...
Enuresis	9	1	4	4	...
External Eye	5	...	3	...	2
Fibrosis	1	...	...	1	...
Leucoderma	1	...	...	1	...
Malnutrition	12	1	8	1	2
Nervous	15	...	10	1	4
Otorrhœa	3	...	3	...	...
Pre-operation	46	1	29	9	7
Psoriasis	4	1	3	...	...
Rheumatism	104	8	72	8	16
Rickets	6	...	4	...	2
Ringworm	4	2	1	1	...
Skin Disease	34	21	9	1	3
Whooping Cough ...	34	20	8	...	6
Grand Total ...	1,400	282	785	144	189

REPORT OF THE CHIEF SANITARY INSPECTOR.

SANITARY ADMINISTRATION.

I beg to submit my Report on the Sanitary Administration of the Borough for the year 1930.

The year under review has been a record one so far as Sanitary Inspection work is concerned. A reference to Table 2 shows that 20,713 visits have been paid compared with 14,249 in 1929. These increased visits are accounted for by greater activity in several sections of the Department's work—e.g., 1924 special visits were paid in connection with the survey of the Town which was made to collect information for compiling the Council's five years programme of slum clearance. Much greater attention has been given to the question of the milk supplies of the town during 1930 than in any previous year, and it will be seen that visits to dairies, cowsheds and milkshops number 684 as compared with 374 in 1929. Meat and Food inspection has also had greater attention than in former years. Slaughter house visits have numbered 790 as compared with 305 in the previous year, whilst visits to meat and food shops have numbered 416 as against 196 in 1929. Special visits for the enforcement of the Public Health Meat Regulations, 1924, have been 169 as compared with 67 last year. These extra visits have been rendered possible by the fact that all your Inspectorial Staff are now qualified Meat Inspectors, Inspector Richardson obtaining the Meat and Food Inspector's Certificate in July. Since that time the Town has been re-divided into three districts instead of two and each Inspector is made responsible for all the duties of sanitary inspection and food inspection, including house to house inspections under the Housing Acts, on his own district.

The Smethwick Corporation Act, 1929, gave the Council power to require that a house should be provided with a galvanised iron ashbin with cover, even though a good ashpit or other receptacle already existed. The renewed activity upon securing this additional power has been responsible for 1,291 visits to premises re ashes accommodation and 448 re-visits.

The number of houses inspected and recorded under the Housing Act is greater by 86 than in 1929 and the number of houses satisfactorily repaired or re-conditioned rose from 623 to 798.

The extra work that has been done in connection with the examination of milk for bacterial count and for the presence of tubercle bacilli is described very fully in the body of the Report, and is also

referred to by the Medical Officer of Health in the introduction to his Report and does not therefore call for elaboration here. I trust that the Council will appreciate the supreme importance of continuing the examination of the town's milk supply for the presence of tubercle bacilli.

Another fact worthy of mention is that this year has seen a complete re-organisation of the record keeping systems of the Department. Dairies, cowsheds and milkshops, workshops, bakehouses and slaughterhouses are now registered on the Acme Visible Card Indexing System. The register contains two cards for each premises, a fixed master card and a detachable card of distinctive colour which may be removed and taken on the district in a special portable wallet. The system is an excellent one, facilitating quick and ready reference and considerably reducing the amount of writing which the Inspectors are called upon to do. A modification of the same system has been adopted in connection with the records of house to house inspections, cards in this case being filed horizontally with visible edges in flat trays in a metal cabinet.

I cannot close this introduction without expressing my keen satisfaction in the fact that the solution of Smethwick's slum clearance problem is now in sight. This is my sixth Annual Report. When I presented my first in 1925 I painted a somewhat gloomy picture of widespread overcrowding, unsatisfactory working class housing conditions and slums which there was no immediate prospect of removing. To-day, thanks to the energy of the Housing Committee, overcrowding is less rife. Three thousand five hundred houses which were falling into dilapidation and disrepair have been re-conditioned and rendered in all respects reasonably fit for habitation, and finally a scheme for the complete elimination of the slum property in the town within the next five years has been promulgated.

Finally I wish to thank the Chairman and Members of the Health Committee for their support and encouragement in every proposal that I have brought before them for improving the sanitary condition of the Town, the Medical Officer of Health for his invaluable advice and friendly co-operation at all times, the District Sanitary Inspectors and Clerical Staff whose loyalty and devotion to duty have been such outstanding features of the year's work. Without them such a record year of progress could not have been achieved.

JOHN H. WRIGHT,
Chief Sanitary Inspector.

SANITARY CIRCUMSTANCES OF THE AREA.

WATER SUPPLY.

The water supply of the town, which is supplied by the South Staffordshire Water Works Company and is derived from deep bore holes chiefly through red sandstone, continues to be of excellent quality and samples taken during the year show it to be very free from organic contamination. The water has no plumbo-solvent action and its hardness is about 20 parts per 100,000. On the 1st April, 1928, the Borough boundaries were extended by the inclusion of a portion of the Warley district and one or two houses in the added area are supplied by private wells. Analyses of the water in each case show that although the waters are not quite free from vegetable organic matter they may safely be used for drinking purposes.

A certain number of the older houses still derive town's water from common stand pipes in the yards, but the number of these is being steadily reduced year by year. As the houses are dealt with under Section 17 of the Housing Act, 1930, the provision of a separate water supply to each house and the demolition of the old stand pipe is secured.

RIVERS AND STREAMS.

Periodical inspection of the brook courses within the Borough have shown that in spite of the fact that many of the streams are uncovered where they pass the back gardens of inhabited houses there is no serious contamination or obstruction taking place. Occasionally the attention of the tenants of houses adjoining the brook courses is drawn to the provisions of the Rivers Pollution Prevention Act, 1876, and to Section 8 of the Smethwick Corporation Act, 1929, which prohibits the deposit or the conveying into any brook course within the Borough of any solid matter so as to interfere with the proper flow of the water course.

I am informed by the Borough Surveyor that nearly half a mile of the Thimblemill brook course where it passes through Messrs. Guest, Keen and Nettlefolds Recreation Ground has been reconstructed. Also a temporary bye-pass has been laid at Rabone Lane, a point at which flooding had been from time to time experienced in times of heavy rain.

DRAINAGE AND SEWERAGE.

The sewage of the town is dealt with by the Birmingham Tame and Rea Drainage Board, of which Smethwick is one of the constituent authorities. In my last survey report I commented on the fact that the system of ventilating the sewers by means of ventilating man-hole covers at the street level was open to the objection that some of these ventilators, according to the direction of the wind or of the air currents in the sewer, did at times act as outlets for foul sewer air. During dry seasons when the sewage was of a concentrated character many complaints were received of offensive smells from ventilators, particularly in the Sandwell district. Since that time a considerable improvement has been effected by the erection of 6in. steel ventilating columns connected to the summits of several sewers in the Sandwell area by means of 6in. stoneware pipes. These ventilating columns provide outlet shafts for foul air enabling the ventilating man-hole covers to

function as fresh air inlets only. The columns are each of a sufficient height to carry the sewer air well above neighbouring buildings. The scheme was carried out by the Borough Engineer and Surveyor, and since its installation no complaints have been received.

The Surveyor reports that the sewerage of the Warley Housing Estate has been commenced.

CLOSET ACCOMMODATION.

Practically the whole of the closet accommodation of the town is on the water carriage system. The few houses where the privy midden or soil pan system remains are in situations not accessible to a sewer, and as practically all these houses will be dealt with in the Council's five years' housing programme by demolition no steps have been taken to secure the conversion of the closets. With the above exceptions the conversion of closets from the conservancy to the water carriage system was completed in about the year 1914, but of the total existing closets about 440 comprise varying types of waste water closets. In the Smethwick Corporation Act, 1929, there is provision for securing the conversion of these closets to fresh water closets, providing that the Corporation contributes not less than one-third of the expenditure incurred in such conversion. It is hoped that these insanitary appliances will be dealt with within the next year or two.

SCAVENGING.

The cleansing of streets and the collection of house refuse are carried out by the Public Works Committee under the direction of the Borough Surveyor. The system of street cleansing in operation is an efficient one giving main and secondary roads a daily service and unclassified roads, according to importance, three times, twice and once at least in each week. House refuse is collected weekly and trade refuse is collected three times or less per week as required, particular attention being given to the refuse from offensive trades. The boating away of refuse to an outside tip has now been abandoned and the refuse in excess of the capacity of the borough destructor is now disposed of by controlled tipping at the Abbey Road tip. I am informed by the Borough Surveyor that the tip has been inspected by Mr. Dawes of the Ministry of Health, who expressed himself as perfectly satisfied that the same complies with the recommendations of the Ministry of Health. In my last survey report for the year 1925 I reported on the position of the town with regard to accommodation for the storage of domestic refuse as follows:—

Number of houses with galvanised iron bins and covers 13,079

Number of houses with a good ash pit with proper door
and covering 2,945

At that time the requirements of the existing law were satisfied if a house had an ash pit with proper door and covering, but the Smethwick Corporation Act, 1929, included a provision under which the Corporation may require the provision of a portable covered galvanised iron dust bin of approved size and construction in lieu of any existing accommodation. During the year under review the provision of over 1,000 additional ash bins has been secured.

SANITARY INSPECTION OF THE AREA.

REGISTER OF COMPLAINTS.

One of the principal sources of information as to isolated defective and insanitary conditions in connection with property continues to be furnished by the Complaint Book in which are entered details of all complaints received. During the present year these numbered 802 as compared with 781 in the previous year. Of this number 2 cases of defective water fittings were reported to the South Staffordshire Water Works Company and in 9 instances matters relative to sewers and street gullies, dangerous buildings, etc., were referred to the Borough Surveyor.

In addition to those registered in the Complaint Book a further 780 complaints were received from other sources, most of these being made verbally to the Inspectors on the districts. The total number of houses visited on complaint was therefore 1,582. Investigations of these complaints revealed the following defects which were dealt with at once by the service of Preliminary Notices on owners or occupiers.

TABLE I.

Dirty Premises	...	...	...	...	...	318
Roofs and Eaves Gutters Defective	...	...	...	...	...	357
Yard and W.C. Drains Blocked	...	...	...	...	...	163
Yard Surfaces Defective	...	...	...	...	...	85
Defective Sinks and Waste Pipes	...	...	...	...	...	60
Accumulation of Offensive Matter	...	...	...	...	...	24
Defective Plaster of Walls and Ceilings	...	...	...	...	...	330
W.C.'s without proper Flushing Arrangements	...	...	...	...	...	57
Ashbins or Ashplaces Defective	...	...	...	...	...	450
Privy Middens Defective	...	...	...	...	...	1
Waste Water Closets Defective	...	...	...	...	...	7
Water Closets Defective	...	...	...	...	...	109
Insufficient Lighting and Ventilation	...	...	...	...	...	59
Overcrowding	...	...	...	...	...	8
Animals kept so as to be a nuisance	...	...	...	...	...	4
Water Fittings Defective	...	...	...	...	...	11
Breach of Bye-Laws	...	...	...	...	...	4
Insufficient W.C. Accommodation	...	...	...	...	...	1
Houses without Sinks	...	...	...	...	...	9
Dampness	...	...	...	...	...	54
Insufficient Water Supply	...	...	...	...	...	13
Dangerous Buildings, etc.	...	...	...	...	...	7
Insufficient Drainage	...	...	...	...	...	17
Defective Drainage	...	...	...	...	...	48
Defective Washboilers	...	...	...	...	...	74
Defective External Brickwork	...	...	...	...	...	222
Defective Floors	...	...	...	...	...	135
Defective Firegrates	...	...	...	...	...	91
Defective Stairs and Handrails	...	...	...	...	...	43
Defective Rain Water Cisterns	...	...	...	...	...	3
Defective Woodwork, Doors, Windows, etc.	...	...	...	...	...	151
Miscellaneous	...	...	...	...	...	53

SUMMARY OF INSPECTIONS.

The total visits paid by the Sanitary Inspectors to the various types of premises for all purposes are summarised below together with the defects found. The visits number 20,713 as compared with 14,249 in 1929.

TABLE II.

	Visits paid.	Defects found.
Special Housing Survey	1,924	—
Housing Acts, 1925 and 1930 ...	781	6,367
Revisits <i>re</i> Housing Acts	7,542	—
On Complaint	1,582	2,592
Miscellaneous	449	2
Infectious Diseases	592	5
Slaughterhouses	790	6
Private Slaughtering	113	—
Meat and Food Shops	416	3
Meat Regulations	169	—
Dairies, Cowsheds and Milkshops	684	3
Pigsties	24	—
Factories	49	2
Workshops	107	4
Outworkers	4	—
Bakehouses	61	11
Canal Boats	54	—
Markets	91	—
Picture Houses, etc.	19	—
Rats and Mice Destruction Act, 1919	12	—
Drains tested	18	2
Smoke Observations	30	6
Visits to work in Progress ...	418	—
Re-inspections <i>re</i> Notices Served	3,036	—
Visits <i>re</i> Ashes Accommodation...	1,291	664
Revisits <i>re</i> Ashes Accommodation	448	—
Ice-Cream Vendors	6	—
Tents, Vans and Sheds... ..	3	—
	<hr/> 20,713 <hr/>	<hr/> 9,667 <hr/>

SUMMARY OF DEFECTS DEALT WITH.

The following table gives an analysis of the various types of defects encountered and dealt with under the Housing Acts, Public Health Acts and other enactments,

TABLE III.

Dirty Premises	...	...	...	...	1,000
Roofs, Spouting and Eaves Gutters	...	...	...	...	949
Yard and W.C. Drains Blocked	...	...	...	...	186
Yard Surfaces Defective	...	...	...	...	299
Defective Sinks and Waste Pipes	...	...	...	...	154
Accumulations of Offensive Matter	...	...	...	...	24
Floors Defective	...	...	...	...	633
W.C.'s without proper flushing arrangements	...	...	...	...	80
Ashbins or Ashplaces Defective	...	...	...	...	1,010
Privy Middens Defective	...	...	...	...	1
Water Closets Defective	...	...	...	...	259
Waste Water Closets Defective	...	...	...	...	59
Insufficient Lighting and Ventilation	...	...	...	...	247
Overcrowded	...	...	...	...	29
Animals kept so as to be a Nuisance	...	...	...	...	5
Water Fittings Defective	...	...	...	...	18
Smoke Nuisances	...	...	...	...	8
Breach of Bye-Laws	...	...	...	...	1
Houses without Sinks	...	...	...	...	8
Insufficient Water Supply	...	...	...	...	41
Dampness	...	...	...	...	278
Dangerous Buildings	...	...	...	...	8
Defective and Insufficient Drainage	...	...	...	...	88
Insufficient W.C. Accommodation	...	...	...	...	14
Defective Plaster of Walls and Ceilings	...	...	...	...	850
Rainwater Cisterns Defective	...	...	...	...	37
Washboilers Defective	...	...	...	...	266
Defective Firegrates	...	...	...	...	452
Defective Staircases and Handrails	...	...	...	...	288
Defective Woodwork of Windows, Doors, etc.	...	...	...	...	697
Defective External Brickwork	...	...	...	...	768
Back-to-Back Houses	...	...	...	...	12
Single Houses	...	...	...	...	15
Miscellaneous	...	...	...	...	883
					9,667

TABLE IV.

LETTERS AND NOTICES SENT OUT.

Letters	...	...	...	...	...	1,168
Preliminary Notices (Public Health Acts)	...	...	...	...	...	708
Secondary Notices (Public Health Acts)	...	...	...	...	...	119
Statutory Notices (Public Health Acts)	...	...	...	...	...	245
Statutory Notices (Section 36, Public Health Act, 1875, re Ashes Accommodation)	...	...	...	...	...	742
Statutory Notices (Factory and Workshops Act, 1901)	...	...	...	...	...	1
Statutory Notices (Smethwick Corporation Act, 1929)	...	...	...	...	...	83
Canal Boats Acts Notices	...	...	...	...	...	2
Cleansing Notices re Infectious Diseases	...	...	...	...	...	23
Statutory Notices (Section 3, Housing Act, 1925, and Section 17, Housing Act, 1930)	...	...	...	...	...	702
Preliminary Notices (Section 3, Housing Act, 1925, and Section 17, Housing Act, 1930)	...	...	...	...	...	214

SMOKE ABATEMENT.

Taking into consideration the industrial character of the town Smethwick is singularly free from atmospheric pollution on any large scale. It is probably safe to say that the ordinary domestic chimney is responsible for the majority of the air pollution which does take place. It has been observed that among industrial concerns the greatest sinners are to be found in small undertakings where an effort is made to raise the maximum of steam by means of under-sized and inefficient boiler plant. During the last five years quite a number of firms have equipped their steam-raising plant with smoke consuming appliances and during the year under review one firm who had hitherto been one of the most persistent offenders scrapped their obsolete plant and installed a new and up-to-date tube boiler. During the year 30 half-hour observations of chimney stacks were made and 6 nuisances recorded. No proceedings were instituted.

PREMISES AND OCCUPATIONS WHICH CAN BE CONTROLLED BY BYE-LAWS AND REGULATIONS.

There are no offensive trades and no common lodging houses in the town. So far no bye-laws have been made for controlling houses-let-in-lodgings as there are no houses so used in the accepted sense of the term. The Council is, however, proposing to deal with four Improvement Areas in its Five Years' Housing Programme and bye-laws for preventing overcrowding etc., will be made to apply to these areas on the lines of the Ministry's Model.

Other premises in the town controlled by bye-laws or regulations are confined to slaughterhouses, bakehouses, etc., and these are dealt with in other parts of the report.

RAG FLOCK ACTS 1911 AND 1928.

There are no premises within the district on which rag flock is manufactured, used or sold.

PROSECUTIONS UNDER THE PUBLIC HEALTH ACTS, ETC.

In nine instances owners of properties were summoned for failure to comply with Statutory Notices served under the Public Health Act, 1875, calling for the abatement of nuisances. In one case the work was completed before the date of hearing and the Summons was withdrawn on payment of costs. In eight cases the Magistrates made an Order for the work to be completed within fourteen days and imposed costs amounting to 8s. 6d. in each of six cases and 8s. in the other two cases.

PROSECUTION UNDER THE SMETHWICK CORPORATION ACT, 1929—SECTION 65.

An owner of land was summoned for permitting land to be occupied by two caravans and a tent without the previous consent of the Corporation. The Magistrates inflicted a fine of £1. in respect of each caravan and 10s. costs. No penalty was inflicted in respect of the tent.

SMETHWICK CORPORATION ACT 1929—SECTION 61.

An application was made to the Justices for an Order for the removal to an Institution of an old woman on the grounds that she was aged, infirm and physically incapacitated and residing in premises which were insanitary, and that she was unable to devote to herself proper care and attention. The Magistrates were satisfied that thorough enquiry and consideration had shown the necessity in the interests of the health of the woman herself and for the prevention of injury to the health or serious nuisance to other persons that she should be removed from the premises in which she was residing and they accordingly made an Order for her removal and detention in Dudley Road Infirmary for a period of three months.

HOUSING.

STATISTICS FOR THE YEAR 1930.

TABLE V.

Number of new houses erected during the year:—

(a) Total (including numbers given separately under (b)—

(i) By the Local Authority—erected within the Borough	192
By the Local Authority—erected outside the Borough	90
	<hr/> 282 <hr/>

(ii) By other Local Authorities ... Nil.

(iii) By other bodies and persons ... 116

(b) With State assistance under the Housing Acts:—

(i) By the Local Authority:

(a) For the purpose of Part 2 of the 1925 Act Nil.

(b) For the purpose of Part 3 of the 1925 Act 282

(c) For other purposes ... Nil.

(ii) By other bodies or persons ... Nil.

1. INSPECTION OF DWELLING HOUSES DURING THE YEAR.

(1) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts)	6,188
Total number of inspections of above houses	17,632
(2) Number of dwelling houses (included in Sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	781
Total number of inspections made to above houses	8,323
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	25
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	711

2. REMEDY OF DEFECTS WITHOUT SERVICE OF FORMAL NOTICES.

Number of dwelling houses rendered fit in consequence of informal action by the Local Authority or their Officers	639
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3 ACTION UNDER STATUTORY POWERS DURING THE YEAR.

A.—Proceedings under Section 3 of the Housing Act, 1925, and Section 17 of the Housing Act, 1930.

(1) Number of dwelling houses in respect of which notices were served requiring repairs	535
(2) Number of dwelling houses which were rendered fit after service of formal notices:—	
(a) By owners	610
(b) By Local Authority in default of owners	19
(3) Number of dwelling houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	Nil.

B.—Proceedings under Public Health Acts.

(1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied	1,919
(2) Number of dwelling houses in respect of which defects were remedied after service of formal notices:—	
(a) By owners	781
(b) By Local Authority in default of owners	17

C.—Proceedings under Sections 11, 14 and 15 of the Housing Act, 1925.

(1) Number of representations made with a view to the making of a Closing Order	2
(Demolished voluntarily without the making of a Closing Order).	

N.B.—Two further unfit houses were purchased by the Corporation and demolished in connection with a brook course improvement scheme.

D.—Proceedings under Section (1) of the Housing Act, 1930.

(1) Number of Clearance Areas represented	2
Total houses included in these areas	17
(2) Number of Clearance Areas declared	2
Number of houses in area	17

E.—Proceedings under Section 19 of the Housing Act, 1930.

(1) Number of houses represented as unfit for habitation	6
(2) Number of notices to Owners of time and place at which demolition of dwelling houses would be considered	6

NOTE.—In addition to the inspections of houses tabulated in the foregoing table, 1,924 visits were paid in the course of a special housing survey which was made for the purpose of compiling the Council's Five Years' Programme.

4. NUMBER OF HOUSES OWNED BY THE LOCAL AUTHORITY.

(1) Houses built during 1929-1930 under Part 3 of the Housing Act, 1925	Nil.
(2) Houses built under Part 2 of the Housing Act, 1925, during 1929-1930	Nil.
(3) Houses built during 1929 and 1930 under other Powers	860
(4) Houses built prior to 1st January, 1929	1,516

2,376

HOUSING CONDITIONS.

1—GENERAL OBSERVATIONS AS TO HOUSING CONDITIONS IN THE AREA.

In my last Survey report for the year 1925, I had to comment unfavourably on the housing conditions of the working class population in the Town. Since that time commendable progress has been made, not only in the reduction of the house shortage, but in the improvement of the sanitary condition of existing houses. Leaving out the number of inhabitants of the Warley district, which was added to the Borough on the 1st April 1928, there is no evidence that the population of the Town has increased appreciably during the last five years. During that period, however, 2,019 new houses have been erected, 1,423 by the Corporation, and 596 by private enterprise. Whilst there is still a considerable amount of overcrowding in the Town, it is my belief that conditions are not so acute as they were five years ago.

With regard to existing housing accommodation, we are in a much happier position to-day than we were five years ago. I reported at that time that many of our working class dwellings were rapidly falling into a state of dilapidation, due in part to excessive wear and tear, and in part to the failure of owners to carry out essential maintenance repairs. In the following year, 1926, the Council decided to make the fullest use of the powers provided by the Housing Act, 1925, for securing the repair of houses not in all respects reasonably fit for habitation, and in July of that year an additional Inspector was appointed to devote the whole of his time to the house-to-house inspection of working class dwellings. From that time until the end of the year 1930, 3,513 houses have been inspected and recorded. In practically 100 per cent. of the houses Statutory Notices have been served under Section 3 of the Housing Act, 1925, or Section 17 of the Housing Act, 1930, requiring thorough repair and renovation, and it must be said that the response of the owners has, on the whole, been good. In only 157 houses has it been necessary for the Local Authority to execute the work in owners' default. The improvements secured have been of an exhaustive character and have embraced not only the complete structural repair of the houses externally and internally, the remedy of dampness, and improvements in the sanitary accommodation, but have included the provision of such additional amenities as properly ventilated food storage accommodation, accommodation for domestic washing, and separate water supply and sink to each house where these were lacking.

2.—SUFFICIENCY OF SUPPLY OF HOUSES.

There is still a serious shortage of houses suitable for occupation by the poorer working classes, and hundreds of families whose total income is below the figure that would enable them to pay the rent of even the smallest municipal house, are living in single rooms. The Council, in drawing up its Five Years' Building Programme, has provisionally decided to build 3,750 houses during the quinquennial period. Of this number 654 are being allocated for the purposes of replacing tenants de-housed by reason of slum clearance operations, and for the relieving of overcrowding in the improvement areas.

There is no evidence of any substantial changes in population during the period under review, but on the addition to the Borough of the Warley district in 1928, the population was increased by an estimated 10,000 persons. This addition cannot be regarded as having had any material effect on the overcrowding problem, as the housing conditions in the added area are, for the most part, very satisfactory, and the proportion of sub-letting in the area must be very low. By the extension of the Borough Boundaries a certain amount of vacant land suitable for house building was brought into the Borough, but this is rapidly being built up and the Council will not be able to complete its Five Years' Programme of house building without going outside the Borough Boundaries.

3.—OVERCROWDING.

There are probably about 3,000 families in the Town who are without houses of their own. This estimate has been arrived at by taking as a basis the shortage revealed by the 1919 Housing Survey, adding to this the number required to meet the needs of the increased population, and deducting the number of houses built in the interval by the Corporation and by private enterprise. This estimate is supported by the number of applicants for Municipal Houses, on the files of the Housing Department. Quite a number of these families are unable to pay the rents of Municipal Houses owing to poverty.

During the next Five Years the Council proposes to deal with four Improvement Areas situated in the more densely populated parts of the Town, and in this process 195 families now living under overcrowded conditions will be re-housed under the special arrangements provided in the 1930 Act for abatement in rents. No special action has been taken during the year under review to deal with overcrowding. The bad cases which come to the notice of the Department are dealt with by the service of Statutory notices under Section 94 of the Public Health Act. In a certain number of cases that has had the effect of stimulating the recipient of the notice to get other accommodation, but it is generally found that he moves to conditions little, if any, better than those he leaves. In some cases families move out of the district into some neighbouring Town.

4.—FITNESS OF HOUSES.

Since the passage of the Housing Act, 1925, this Council has made the fullest use of the powers contained in Section 3 for securing the repair of working class dwellings, and as stated earlier in this report, 3,513 houses have been dealt with under this Section and under Section 17 of the Housing Act, 1930. No particular difficulties have been encountered, and any reluctance on the part of owners to comply with the Council's requirements was most apparent in the earlier years. Now that the principal owners of the working class property in the Town have become familiar with our procedure there is very little opposition to the very comprehensive specifications of requirements which are served. Misunderstandings are usually dissolved by personal interviews at the office or, preferably, on the property, and it is generally not difficult to convince the owner that it is in his own interests to carry out in full the requirements of the Council.

Immediate future action will be concentrated on dealing with the conditions within the four districts which are to be treated as Improvement Areas. These areas contain in all 1,148 houses, 316 of which will be dealt with by demolition or by the conversion of back-to-back into through houses, and the remainder under Section 17 by securing their repair and renovation.

It is further proposed to deal with six small Clearance Areas containing in all 66 houses, and two of these areas have already been declared. Simultaneously with the slum clearance programme it is proposed to secure the repair under Section 17 of the Act of 1930, of a further 2,000 houses. At the end of the next quinquennial period the Council ought to be in a position to say that not only have the slums of the Town been abolished, but also that the whole of the working class dwellings are in all respects reasonably fit for habitation according to present-day standards. Every house will be satisfactorily lighted and ventilated; will be properly drained and provided with adequate sanitary conveniences and with a sanitary sink and arrangements for disposing of slop water; will be free from serious dampness, and in good general repair. Each house will also have a separate water supply, adequate washing accommodation, adequate facilities for preparing and cooking food, suitable accommodation for the storage of food, and suitable accommodation for the proper storage of domestic refuse.

It is not possible to give figures showing how many houses are without a separate internal water supply, but the number is relatively small. With regard to sanitary accommodation, by far the majority of houses in the Town have a separate water closet within their own curtilages, and where w.c.'s are used in common, a standard of one closet to every two houses has been secured.

5. THE COUNCIL'S FIVE YEARS SLUM CLEARANCE PROGRAMME.

The Council was required to submit to the Minister of Health before the end of 1930 its proposals for house building and for slum clearance operations for the next five years, and the statement submitted together with some explanatory notes are here appended.

QUINQUENNIAL STATEMENT.

Name of Local Authority—County Borough of Smethwick.				
Population (estimated figure for middle of 1929)	85,120			
Number of inhabited houses (according to rate book)	20,065			
A. Estimated production of new houses by the local authority during the next five years	3,750			
B. Estimated production of new houses of working class type by private enterprise during the next five years.				
(1) With subsidy under the Act of 1924	Nil			
(2) Under arrangements made under Section 29 of the Act of 1930	Nil			
(3) Otherwise	100			
	3,850			
C. Estimated number of new houses to be allocated by the Local Authority during the next five years to the purposes of the Housing Act, 1930 (i.e., the purposes mentioned in E. and F.)	654			
D. Estimated number of new houses to be allocated by the Local Authority during the next five years to the purposes of the Act of 1924 (i.e., new housing) ...	3,096			
	3,750			
E. Estimated number of houses to be demolished during the next five years:—				
(1) In clearance Areas	66			
(2) In Improvement Areas:—				
(a) For opening the Area	32			
(b) As unfit houses	150			
(c) Back houses to be absorbed in process of conversions	51			
(3) Individual houses outside clearance and improvement areas	49			
Back houses to be absorbed in the process of conversions	83			
	431			
F. Estimated number of persons to be displaced during the next five years:—				
(1) By any of the processes mentioned in E	1,988			
(2) To abate overcrowding in improvement areas ...	712			
	2,700			

G. Estimated number of houses to be repaired under Part 2 of the Housing Act, 1930, during the next five years — 2,000

The number of houses which the Council proposes to build during the next five years, viz: 3,750, has been based on the present day need for houses in the district, so far as this is ascertainable (including the number required to re-house tenants displaced by slum clearance), together with the estimated demand which will be created during the five years period.

In submitting the Council's slum clearance proposals for the next five years it is pointed out that these proposals aim at dealing with the whole of the slum problem of the Town. Smethwick is fortunate in that it has no large congested areas containing considerable numbers of houses which are unfit for habitation, either by reason of the bad sanitary conditions of the houses themselves, or by bad arrangement of the houses or other buildings in the areas. The actual slum problem of the district may be said to consist of some 550 houses, which by reason of their age, dilapidated condition, or type (many of them are of the back to back or single type), may be regarded as unfit for habitation. These houses are scattered throughout the Town in small blocks and are usually surrounded by houses of better type. In these circumstances the Council is not able to declare any large areas as Clearance Areas. A reference to Section E, Sub-Section (1) in the tabular statement will show that it is only proposed to demolish 66 houses in Clearance Areas and these houses are contained in six areas of small size. Two of these areas, containing eight houses and nine houses respectively, have already been declared. In view of the wide powers contained in the Act of 1930 for dealing with Improvement Areas, the Council have provisionally approved four Improvement Areas, to be dealt with in the first quinquennial period. These areas are styled as Sandwell No. 1 containing 331 houses, Sandwell No. 2 containing 289 houses, Six Ways containing 333 houses and Merry Hill containing 195 houses. In these areas it will be possible to secure not only the demolition of the unfit houses, but also the repair of others, and, what is perhaps of as great importance, the abatement of overcrowding within the areas with the improved subsidy of the 1930 Act. The four areas contain altogether 1,148 houses. Of this number 150 will be demolished as unfit for habitation, and a further 51 will be absorbed in the process of conversions, i.e., by the conversion of 102 back-to-back houses into 51 habitable through houses. 32 houses will probably be acquired at market value and demolished for the purpose of opening up the areas. These figures are shown in Section E., Sub-section (2) of the tabular statement. 195 houses are overcrowded and the excess families, numbering 712 persons, will be re-housed under the special terms of the 1930 Act.

A reference to Section E., Sub-section (3) of the statement shows that 49 individual unfit houses outside Improvement areas and Clearance areas will be demolished as unfit for habitation, and a further 83 will cease to exist in consequence of the proposed conversion of 166 back-to-back houses into 83 through houses. The five years slum clearance programme will call for a total of 654 houses for re-housing purposes, and this number has been allocated for the purposes of the Housing Act, 1930, as shown in Section C of the tabular statement.

In addition to the slum clearance proposals outlined above, the Council proposes to continue securing the repair of houses suitable for occupation by the working classes, under Section 17 of the new Act, and estimates that 2,000 houses will be so repaired during the next five years period.

INSPECTION AND SUPERVISION OF FOOD

(a) MILK SUPPLY.

DAIRIES, COWSHEDS AND MILKSHOPS.

The number of Dairymen on the Register at the end of the year was 402 as compared with 405 in 1925. The number of cowsheds is 5.

A reference to Table 2 shows that 684 visits of inspection were paid to these dairies and cowsheds during the year. The sanitary condition and cleanliness of the premises where milk is produced and stored is steadily improving, and quite a number of hucksters who hitherto sold loose milk under conditions which were likely to cause contamination have been induced to discontinue milk selling and have been struck off the Register.

The milk supply of the Town has received more particular attention during the year than any other branch of the Sanitary Inspection Department, with the single exception of the housing conditions of the working classes. Careful and protracted investigations have been made over a period extending from November, 1929, until the date of the compilation of this Report, and are still continuing. All the sources of the Town's milk supply have been examined, not only for quality, but also for cleanliness and for the presence of tubercular infection. The reports which follow summarise the results of the examination of 203 samples of milk for bacterial content, and of 203 examinations for the presence of tubercle bacilli. The samples have been taken as frequently as the pre-occupations of the Inspectorial Staff and of the Birmingham University Public Health Laboratory would permit, and the fact that there chance to be exactly 203 samples in each group is purely a coincidence.

EXAMINATIONS OF MILK FOR BACTERIAL CONTENT.

Two series of samples have been collected and submitted to the Birmingham University Public Health Laboratory for examination for bacterial count; the first, which I will call the Winter series, were taken

during the period November, 1929, to March, 1930, and the second, or Summer series extending from June to September, 1930. The samples were collected from every possible variety of premises and covered all the various sources of the Town's milk supply.

In the tabulated results which follow, the milks have been placed into groups representing the various sources of wholesale supply, and the average count in each group has been given for purposes of comparison.

The investigation has shown that, with a few exceptions the milk supply of the Town attains a fairly good standard of cleanliness. The Winter series showed an average bacterial content for all the milks in all groups (excluding group E which are specially treated milk) of 137,004 bacteria per c.c.

Commenting on the samples in the winter series it will be noted that the three worst samples are numbers 13, 14 and 15, which each contained over one million bacteria per c.c. I wrote letters of warning to the wholesale and retail suppliers of these milks and subsequent samples have been satisfactory in each case. Samples 9 and 74, each containing approximately half a million bacteria per c.c. were both purchased from a huckster's shop, the second after written and verbal warning. This milk was derived from a local farm and examinations of this farmer's milk collected in various ways—direct from the cow, from the dairy, and from the milk float in actual course of delivery at the shop, all gave exceedingly low counts showing that the contamination took place on the retailer's premises. This shopkeeper has now voluntarily agreed to discontinue the sale of milk.

Excluding the five bad samples referred to above, the average count per sample during the winter months was 85,568 bacteria per c.c. or less than half of the contamination permitted in Grade "A" Milk.

The figures for the Summer series are not so encouraging although the general conclusions to be drawn from a comparison of the milks in the various groups remain substantially the same. In calculating the average bacterial content of the samples in Group B (Summer series) I have excluded sample number 149 as its inclusion would have given an artificially high average for that group. The dealer supplying this milk was induced to discontinue selling loose milk on the seriousness of the contamination being pointed out to him, and he was struck off the Register.

The outstanding conclusion to be drawn from the classified results of the investigation is that the most highly contaminated supplies are derived from the large wholesale distributors who receive milk from a number of farms and bulk this together before distribution. Thus the average contamination of the milks in Group A derived from large City distributors is approximately double that of Group B, milks which are handled by smaller wholesalers in the Borough. Similar satisfactory conclusions may be drawn from a comparison of the samples in Group C, derived from farmers outside the Borough, with those in Group D from farms within the Borough under the direct supervision of your own Health Department Staff,

Details of results of Examinations of Milk for Bacterial Count.

WINTER SERIES.

GROUP A.—MILK DERIVED FROM LARGE DISTRIBUTING DEPOTS IN THE CITY OF BIRMINGHAM.

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Conditions of Storage.
13	Confectioner's shop	1,504,000	Covered pail. Shop clean.
15	Ditto	1,312,000	Covered pail in clean shop.
26	General Dealer	151,000	Covered pail at cellar head. Fair.
27	Ditto	24,050	Covered pail on counter. Fair.
28	Confectioner's shop	124,150	Covered pail on counter. Good.
31	Grocer's shop	31,400	Covered pail. Good.
33	General Dealer	21,000	Covered pail. Poor.
35	Private house dairy	291,400	Uncovered handcan in verandah. Poor.
36	Confectioner's shop	76,250	Covered pail. Good.
39	Ditto	427,500	Clean covered pail. Good.
40	Ditto	80,000	Covered pail on counter. Good.
43	General Dealer	39,900	Covered jug. Fair.
51	Huckster's shop	60,200	Covered pail. Poor.
64	Retail dairy premises	42,100	Covered pail on counter.
67	General Dealer	42,000	Covered pail. Good.
73	Confectioner's shop	51,970	Same source as sample No. 15, after warning.
75	Ditto	4,700	Covered pail on counter. Good.
78	General dealer	7,500	Covered pail. Good.
96	Ditto	8,330	Uncovered bowl. Poor.
99	Confectioner's shop	90,000	Covered pail. Good.
101	Ditto	3,785	Covered pail. Clean.
104	Float in course of delivery	18,170 $2\frac{1}{2}$	gallon hand-can.

AVERAGE BACTERIAL COUNT OF SAMPLES IN GROUP A—200,518.

GROUP B.—MILK DERIVED FROM WHOLESALE DEALERS
WITHIN THE BOROUGH.

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Conditions of Storage.
14	Coffee house	1,344,000	Covered pail in verandah. Only fair.
16	Cook-shop	84,000	Open pail on counter. Poor.
20	General dealer	18,200	Covered pail on counter. Poor.
21	Confectioner's shop	160,250	Covered pail. Very good.
22	General dealer	241,150	Covered pail. Good.
23	Confectioner's shop	117,700	Covered pail. Good.
29	General dealer	123,200	Uncovered pail. Poor.
32	Grocer's shop	88,250	Large jug in annex. Poor.
34	General dealer	44,200	Covered pail. Good.
38	Private house dairy	84,000	Covered churn in yard.
44	General dealer	6,800	Uncovered pail. Fair.
47	Ditto	30,400	Covered pail. Good.
48	Ditto	289,150	Uncovered pail. Fair.
50	Ditto	169,500	Covered pail. Good.
52	Confectioner's shop	6,530	Covered pail. Good.
72	Coffee house	3,600	Same source as sample No. 14, after warning.
79	Confectioner's shop	342,850	Sample bottle cracked. Not sterile.
83	Ditto	165,400	Covered pail. Good.
85	Private house dairy	148,500	Churn in yard.
89	Hand-can during delivery	146,000	
90	Milk float in course of delivery	16,300	
91	Private house dairy	17,000	Covered pail in scullery. Fair.
97	Huckster's shop	22,250	Greengrocery sold. Conditions poor.
102	General dealer	20,000	Covered pail. Good.
103	Ditto	37,600	Uncovered pail. Poor.
105	Milk float in street	19,000	2½ gallon hand-can.
108	From float during delivery	69,600	2½ gallon hand-can.

AVERAGE BACTERIAL COUNT OF SAMPLES IN GROUP B—141,312.

GROUP C.—MILK DERIVED DIRECT FROM FARMERS OUTSIDE
THE BOROUGH AND DELIVERED BY ROAD OR RAIL.

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Conditions of Storage.
18	General dealer	42,600	Covered pail. Good.
24	Confectioner's shop	44,400	Covered pail. Good.
25	Private house dairy	2,100	Covered churn in yard.
37	Ditto	37,300	Churn in yard.
41	Procured from train at railway station	137,000	
42	Private house dairy	5,600	Churn in yard.
45	From churn at railway station	992,000	
46	Ditto	396,550	
49	General dealer	25,900	Covered pail. Good.
56	From churn at railway station	126,000	
66	From float during delivery to retailer	36,500	
70	From churn at railway station	5,925	
71	From churn at railway station	14,250	
76	Ditto	35,000	
77	Ditto	37,000	
81	From float in street	244,000	Sample taken from 2 gallon hand-can just filled from churn in street.
82	General dealer	32,500	Uncovered pail.
86	From churn at Railway station	75,000	
87	Ditto	55,400	
92	Ditto	55,370	
93	Ditto	5,550	
94	From float in street	169,550	
106	Procured in course of delivery to local wholesaler	43,400	

AVERAGE BACTERIAL COUNT OF SAMPLES IN GROUP C—113,865.

GROUP D.—MILK DERIVED FROM FARMS WITHIN THE BOROUGH.

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Conditions of Storage.
1	Procured at farm	1,900	Direct from udder of cow.
2	Ditto	42,150	Ditto
3	Ditto	91,250	Ditto
4	Ditto	2,500	Ditto
5	Ditto	7,600	From churn in dairy.
6	Ditto	49,700	From handcan in dairy.
7	Ditto	61,850	From churn in dairy.
8	Ditto	81,000	From glass jar stored overnight in house.
* 9	Huckster's shop	532,000	Covered pail. Conditions poor.
10	From milk float during round	41,300	Covered handcan.
11	From churn on completion of round	27,870	
12	From handcan on completion of round	152,150	
17	Confectioner's shop	52,500	In open bottle. Poor.
19	Ditto	35,700	Covered pail. Good.
30	General dealer	32,270	Uncovered pail. Poor.
62	From farm dairy	200	Bulk milk of herd after cooling (evenings milk).
63	Ditto	200	Ditto (mornings milk).
*74	Huckster's shop	468,000	From same retailer as 9 after warning letter.
80	Confectioner's shop	38,230	Covered pail. Good.
100	From float in course of delivery	40,350	Two gallon handcan.

*This retailer has now voluntarily agreed to discontinue selling milk.
AVERAGE BACTERIAL COUNT OF SAMPLES IN GROUP D—87,936.

AVERAGE BACTERIAL COUNT OF SAMPLES IN GROUP D, EXCLUDING Nos.
9 and 74—42,151.

GROUP E.—SPECIALLY TREATED MILKS AND MILKS SOLD
UNDER “THE MILKS (SPECIAL DESIGNATIONS) ORDER,
1923.”

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Remarks.
*53	From handcan in course of delivery	13,800	Pasteurised loose milk.
*54	From 17 gallon churn in course of delivery	6,000	Ditto
*55	Sealed pint bottle after delivery to house	310	Pasteurised bottled.
*57	From float at end of round	32,000	Pasteurised loose milk.
58	General dealer	nil	Pint bottle of Sterilized milk.
59	Confectioner's shop	nil	Ditto
60	General dealer	nil	Ditto
61	Ditto	nil	Ditto
65	Clean model dairy	nil	Ditto
68	General dealer	440	Sterilized milk (in stock for 3 days).
69	Clean model dairy	1,875	Grade “A” Milk, bottled in Smethwick.
84	From handcart in course of delivery	8,300	Grade “A” Milk bottled in Birmingham.
88	From float during delivery	7,150	Loose pasteurised milk.
95	From float in course of delivery	33,500	Loose pasteurised milk.
98	Confectioner's shop	nil	Pint bottle sterilized milk.
107	From churn in course of delivery at local bottling establishment	700	Grade “A” Milk delivered by road. (No B. Coli)
109	From float in course of delivery	200	Pint bottle sterilized milk.
110	From churn in course of delivery at local bottling establishment	48,300	Grade “A” Milk delivered by road. (No B. Coli)
111	Ditto	8,170	Ditto (No B. Coli)

*This milk is produced at a large model pasteurising depot in the City of Birmingham, and is delivered to the consumer in sealed bottles at the same price as ordinary loose milk.

GENERAL AVERAGE (EXCLUDING GROUP E)—137,004.

GENERAL AVERAGE (EXCLUDING GROUP E AND ALSO FIVE BAD SAMPLES)—
85,568.

Details of Results of Examinations of Milk for Bacterial Count.

SUMMER SERIES.

GROUP A.—MILK DERIVED FROM LARGE DISTRIBUTING DEPOTS IN THE CITY OF BIRMINGHAM.

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Remarks.
131	General dealer	29,700	Uncovered pail. Clean shop.
137	Local dairy	33,500	From can on counter.
138	Ditto	16,500	From can stocked in ice.
142	Ditto	3,040,000	Covered pail in yard.
143	Ditto	3,168,000	Covered pail in glass conservatory.
162	General dealer	221,700	From half filled pint bottle. Fair only.
171	Ditto	156,150	Uncovered pail. Clean shop.
172	Local dairy	64,000	Covered pail. Premises clean.
173	General dealer	3,840,000	Covered pail. Clean shop.
175	Confectioner's shop	1,408,000	Covered pail. Clean shop.
178	Local dairy	27,700	Covered handcan in dairy yard.
179	Confectioner's shop	2,350	Covered pail in clean shop.
180	Ditto	256,000	Covered pail in clean shop.
193	General dealer	1,696,000	Covered pail in clean shop.

AVERAGE BACTERIAL COUNT OF SAMPLES IN GROUP A—997,114.

GROUP B.—MILK DERIVED FROM WHOLESALE DEALERS WITHIN THE BOROUGH.

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Remarks.
113	Handcan during delivery	68,160	
119	Eating house	200,250	Uncovered pail. Fair.
121	General dealer	19,700	Covered pail on counter.
122	Ditto	42,700	Covered pail. Only fair.
123	Cooked meat shop	8,300	Covered pail. Very clean shop.
125	Local dairy	784,000	From 17 gallon churn in dairy.
129	From float on round	110,000	From 17 gallon churn.
130	Coffee House	2,080,000	Covered pail in verandah. Very warm. Poor.
132	Confectioner's shop	352,000	Covered pail. Clean shop.
133	General dealer	1,024,000	Covered pail. Clean shop.
145	From float on round	373,700	Taken from 2 gallon handcan.
*149	General dealer	8,784,000	Uncovered pail in passage adjoining shop (unsatisfactory).
154	From float on round	1,248,000	From handcan.
155	Ditto	67,150	Ditto
158	General dealer	544,000	Covered pail. Fair.
168	Ditto	57,300	Uncovered pail. Shop clean.
169	Ditto	11,400	Covered pail. Shop clean.
181	Ditto	36,250	Uncovered pail. Clean shop.
183	Confectioner's shop	170,000	Covered pail in clean shop.
186	General dealer	8,760	Uncovered pail in clean shop.

*This milk inoculated into 2 guinea pigs caused death within 24 hours of both animals. The vendor has now discontinued selling loose milk and has been struck off the Register.

AVERAGE BACTERIAL COUNT OF SAMPLES IN GROUP B EXCLUDING SAMPLE
No. 149—379,245.

**GROUP C.—MILK DERIVED DIRECT FROM FARMERS OUTSIDE
THE BOROUGH AND DELIVERED BY ROAD OR RAIL.**

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Remarks.
124	Local Dairy	2,694,000	Two days' old milk, declared not for sale but measuring ladle was in can.
126	Local wholesale depot	28,760	Procured from churn in course of unloading.
127	From float on round	640,000	Taken from two gall. hand can.
134	General dealer	7,900	Covered pail. Clean shop.
135	From motor lorry at local dairy	44,630	17 gallon churn in course of delivery.
136	From motor lorry at local dairy	5,700	Ditto
140	Railway station	7,600	From 8 gallon churn.
141	Ditto	62,650	From 13 gallon churn.
144	Local pasteurising depot	333,700	Mixed milk from various Staffordshire farms.
148	From float on round	2,688,000	From 2 gallon can.
150	Ditto	16,500	From covered churn.
151	Ditto	175,550	Covered handcan.
152	Ditto	81,000	Ditto
153	Ditto	68,000	Ditto
156	Ditto	59,850	Ditto
157	General dealer	33,360	Pail on counter. Fair.
159	From float on round	36,800	Covered handcan.
160	General dealer	61,200	Uncovered pail. Clean shop.
161	From float in street	111,150	From handcan.
163	ditto	20,750	2 gallon handcan.
164	Railway station	18,100	From 13 gallon churn.
165	Ditto	13,400	From 17 gallon churn.
166	Ditto	74,130	From 12 gallon churn. Visible dirt in milk.
167	Ditto	30,630	From 14 gallon churn.
170	General dealer	148,700	Uncovered pail in clean shop.
188	Railway station	8,800	From 17 gallon churn.
189	Ditto	36,000	Ditto
190	Ditto	2,700	From 10 gallon churn.
191	Ditto	1,650	Ditto
192	Local dairy	93,000	From churn in clean dairy.
194	From float in street	51,550	From handcan.

AVERAGE BACTERIAL COUNT OF SAMPLES IN GROUP C—246,969.

GROUP D.—MILK DERIVED FROM FARMS WITHIN THE BOROUGH.

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Remarks.
114	Procured at farm	70,000	Direct from udder of cow. Animal not clean.
115	Ditto	12,500	Direct from udder of cow. Animal clean, byre dirty.
116	Ditto	53,200	Mixed milk of herd 5 hours after milking.
117	Ditto	224,000	Same milk as above, 20 hours after milking.
118	Ditto	94,300	Mixed milk of herd 5 hours after milking.
128	Ditto	116,000	From 17 gallon churn in dairy.
187	From float in street	31,950	Taken from handcan.
195	Ditto	420,000	Milk derived solely from Jersey cows.

AVERAGE BACTERIAL COUNT OF SAMPLES IN GROUP D—127,743.

GROUP E.—SPECIALLY TREATED MILKS AND MILKS SOLD UNDER "THE MILK (SPECIAL DESIGNATIONS) ORDER 1923."

No. of sample.	Place where sample was collected.	Bacteria per c.c.	Remarks.
112	From float in course of delivery	10,500	Grade "A" in bottle.
120	General dealer	3,250	Bottled sterilized milk.
139	Local dairy	975	Bottled pasteurised, stored in ice.
146	Local pasteurising depot	34,600	From cooler after pasteurisation.
147	Local dairy	187,150	From 10 gallon churn Grade "A" on delivery.
174	Ditto	142,800	Bottled Grade "A."
176	From float in street	158,000	Pasteurised loose milk.
177	Ditto	34,200	Ditto
182	Huckster and Greengrocer's shop	326,400	From bottle of sterilized milk open 2½ hrs. previously. Experimental sample.
184	From float on round	3,800	Bottle sterilized milk.
185	Ditto	9,500	Ditto.
196	From lorry on round	1,125	Pasteurised bottled milk.
197	Ditto	610	Grade "A" pasteurised milk.
198	Average household pantry	2,025	Same milk as 196 after storing for 1 hour without stopper.
199	Ditto	145	Same milk as 197 after storing for 1 hour without stopper.
200	From float on round	6,263	Bottled Grade "A" milk.
201	From float on round	175	Bottled sterilized milk.
202	Average household pantry	11,200	Same milk as 200 after storing unstoppered for 1 hour.
203	Ditto	570	Same milk as 201 after storing unstoppered for 1 hour.

GENERAL AVERAGE (EXCLUDING GROUP E)—414,489.

Special Investigation of the Town's Milk Supply for the presence of Tubercle Bacilli.

Commencing in June, 1930, a number of samples of the Town's Milk Supply were collected and submitted to the Birmingham University Public Health Laboratory for examination for the presence of Tubercle Bacilli. The earlier results of the investigation were so startling that the Health Committee authorised me to continue the taking of samples at the rate of eight per week until further notice. The work is still proceeding and this report deals with samples between June, 1930, and the end of April, 1931. The following is a summary of the results:—

1930.

	No. of samples examined.	No. of samples found positive.
Non-pasteurised milk	53	9
Pasteurised milk	7	1

FIRST FOUR MONTHS OF 1931.

	No. of samples examined.	No. of samples found positive.
Non-pasteurised milk	115	8
Pasteurised milk	28	7

TOTAL SAMPLES EXAMINED TO END OF APRIL, 1931.

	No. of samples examined.	No. of samples positive.	Percentage of positive results.
Non-pasteurised milk	168	17	10.1
Pasteurised milk	35	8	22.9
	<hr/> 203	<hr/> 25	<hr/> 12.3

Full particulars and action taken in connection with each positive sample are given in the following pages.

Samples examined for Tubercle Bacilli during year 1930.

POSITIVE RESULTS.

A. NON-PASTEURISED.

- SAMPLE No. 14.** Sample procured at railway station. From Staffordshire farm. One cow found Tubercular and slaughtered under the Order. Post-mortem examination confirmed the diagnosis. Samples of mixed milk of remainder of herd negative.
- SAMPLE No. 18.** Collected from confectioner's shop. Derived from same farm as sample No. 14 (above).
- SAMPLE No. 20.** Procured at railway station. From Staffordshire farm. One cow slaughtered under the Order and found Tubercular on post-mortem examination. Sample of mixed milk from remainder of herd negative.
- SAMPLE No. 33.** Staffordshire farm. Mixed milk of 6 churns (3 morning and 3 evening milk). One Tubercular cow slaughtered under the Order. One suspicious animal isolated.
- SAMPLE No. 34.** Staffordshire farm. Mixed milk of 4 churns (2 morning and 2 evening milk). Two Tubercular cows were slaughtered under the Order. Two other suspicious animals isolated.
- SAMPLE No. 40.** Shropshire farm. Mixed milk of 5 churns. One Tubercular cow slaughtered under Order. Remaining mixed milk negative.
- SAMPLE No. 41.** Shropshire farm. Mixed milk of 6 churns. One Tubercular cow slaughtered under the Order. Remaining mixed milk negative.
- SAMPLE No. 45.** Shropshire farm. Mixed milk of 5 churns. One Tubercular cow slaughtered under the Order. Mixed milk of remaining cows negative.
- SAMPLE No. 47.** Shropshire farm. Mixed milk of 4 churns. Five samples taken by Shropshire County. One returned positive. One cow slaughtered under the Order.

B. PASTEURISED.

- SAMPLE No. 16.** Bottle of pasteurised milk procured from large local pasteurising depot. Mixed milk of 34 farms. The six reports numbers 33, 34, 40, 41, 45 and 47, are concerned with the farms whose milk gave positive results. The remaining 28 milks were found to be Tubercle-free.

Samples examined during first four months of 1931.

POSITIVE RESULTS.

A. NON-PASTEURISED.

- SAMPLE No. 62.** Procured from Staffordshire farmer on delivery at local pasteurising depot. Mixed milk 2 churns (morning and evening). Two Tubercular cows slaughtered under Order. Post-mortem examination showed advanced Tuberculosis.

SAMPLE No. 95. Procured from Staffordshire farmer on delivery at local pasteurising depot. Same source as sample No. 62. Sample taken from mixed milk of five churns (85 gallons). Two Tubercular cows slaughtered under Order.

SAMPLE No. 98. Collected from local retailer and supplied by Staffordshire farmer. One cow slaughtered under Order. Sample of mixed milk from remainder of herd negative.

SAMPLE No. 149. Procured from supply of Shropshire farmer on delivery at local pasteurising depot. Mixed milk of two churns (morning and evening). One Tubercular cow slaughtered under Order. Sample of bulk milk from remainder of herd negative.

SAMPLE No. 170. Procured from supply of Shropshire farmer on delivery at local pasteurising depot. Mixed milk 3 churns (30 gallons). County Medical Officer notified. Result not yet to hand.

SAMPLE No. 184. Procured from local wholesale depot from supply of Shropshire farmer. Mixed milk three churns. County Medical Officer notified. Result not yet to hand.

SAMPLE No. 185. Procured at local wholesale depot from supply of Shropshire farmer. Mixed milk 2 churns. County Medical Officer notified. Result not yet to hand.

SAMPLE No. 189. Procured from supply of Shropshire farmer on delivery at local pasteurising depot (mixed milk 9 churns, 150 gallons). County Medical Officer notified. Result not yet received.

B. PASTEURISED.

SAMPLE No. 76. From local retailer. Pasteurised. Milk supplied by large Birmingham pasteurising depot. Birmingham City Medical Officer of Health notified and steps taken to examine samples from each individual farmer. Final result not known.

SAMPLE No. 104. Collected from local retailer. Pasteurised milk supplied by large City pasteurising depot (not the same depot as sample No. 76). Birmingham City Medical Officer of Health notified and steps taken by him to secure examination of samples from individual farmers. Final results not known.

SAMPLE No. 107. Milk supplied by local pasteurising depot, mixed milk 33 farms. Examination of milk from each individual farm and three returned positive. Results given in the following reports.

SAMPLE No. 119. Collected from local retailer. Pasteurised milk supplied by local pasteurising depot. Same source as sample No. 107.

SAMPLE No. 126. Procured from local retailer. Pasteurised milk derived from same source as sample No. 107.

SAMPLE No. 133. Collected from local dairy. Supplied by large City pasteurising depot. Same source as sample No. 104. City Medical Officer of Health notified.

SAMPLE No. 136. Collected from local dairy. Milk derived from large Birmingham pasteurising depot. Same source as sample No. 104. City Medical Officer of Health notified.

Sample No. 16, which was collected in August, 1930, was from a bottle of pasteurised milk produced at a large pasteurising depot. It was found on investigation that this milk was derived from the bulked supplies of 34 farms and immediate steps were taken to collect samples

from the supplies of each of these farms on arrival at the depot. Results of the examinations showed that no less than 6 of the 34 farmers were consigning into the Borough milk containing living tubercle bacilli. The County Medical Officer of Health was notified in each case and steps were taken to carry out veterinary inspection of the herd as well as examination of the milk from suspected cows. In each case the accuracy of the Birmingham University Public Health Laboratory report was confirmed, one or more animals at each suspected farm being found to be tubercular and slaughtered under the Tuberculosis Order, 1925. Four of the suspected samples were from Shropshire farmers and two from Staffordshire farmers. On these six farms, eight cows were slaughtered and three isolated. The total milk yield of these infected cows was excluded from the Town's supply and was prevented from infecting milk from other healthy animals with which it was mixed. The total daily quantity of milk being pasteurised at this particular depot at that time was 1,900 gallons. The infection persisted in spite of the great dilution and survived the process of pasteurisation. Assuming the generous figure of one pint of milk per head per day, this represents the daily milk ration of 15,000 persons, which at the time of our investigations was in a dangerously infective condition. Actually the daily milk consumption in this Town is probably nearer one third of a pint per head per day, and on this basis the infected milk would have been consumed by 45,000 persons, or one-half the population of the Town.

Sample No. 62 was procured direct from the milk of a Staffordshire farmer supplying another pasteurising depot in the Town where the daily total quantity pasteurised is 300 gallons. The milk from the remaining farmers, seven in number, gave negative results and samples after pasteurisation at this depot have always given negative results. Sample No. 95 was from the same farm as No. 62 prior to the discovery and slaughter of the infected animals and samples examined since the elimination of the offending cows have given negative results. Samples Nos. 74, 104, 133 and 136 were supplied by two different pasteurising depots not in the Borough, each of which deals with very large quantities of milk daily. The Medical Officer of Health of the District concerned was notified and steps were taken to secure the examination of the milk of each individual farmer. The local pasteurising firm whose supplies were cleared of tubercle infected milk in 1930, made new contracts in 1931 with farmers who had not hitherto been sending milk into the Borough. A sample of milk, No. 107, taken early in February from this depot was found to contain living tubercle bacilli. This necessitated the re-examination of all the milks coming into the depot, representing this time 33 farms in Shropshire and Staffordshire. Of these 33 farms 3 were found to be supplying Tubercle infected milk :—Samples Nos. 149, 170 and 189.

It is obvious that we cannot hope by existing methods to reach that stage when we can claim to have eliminated tubercle infected milk from the Town's supply. Large wholesale dealers renew their contracts at the end of six months or in some cases 12 months and at the end of each contract period the sources of supply are likely to be changed. Even if the farms sending milk into the Town always remain the same, we have no guarantee that they are not introducing from time to time tubercular cows into their herds. It follows, therefore, that if good results are to be obtained, these examinations should be continued indefinitely.

Special comment on the significance and importance of this work is made by the Medical Officer of Health in the introduction to his Report.

(2) MILK (SPECIAL DESIGNATIONS) ORDER, 1923.

At the close of the year the following licenses under the Milk (Special Designations) Order were in force in the Borough:—

TABLE 6.

Five dealer's Licenses to sell Grade "A" Milk.
Six Supplementary Licenses to sell Grade "A" Milk.
One Supplementary License to sell Grade "A" (Tuberculin Tested Milk.
Two dealer's licenses to sell Pasteurised milk.
One Supplementary license to sell Grade "A" Pasteurised milk.
Two Supplementary licenses to sell "Certified" milk.

There are two pasteurising depots in the town and at both these a certain amount of bottled sterilised milk is also produced. Each depot is licensed to bottle and sell Grade "A" milk. The daily output from these depots is as follows:—

No. 1 Depot:—

300 gallons of Pasteurised milk.
35 gallons of bottled Grade "A" Milk.
85 gallons of Sterilised milk.

No. 2 Depot:—

1,100 gallons of Pasteurised milk.
43 gallons of bottled Grade "A" milk.
350 gallons of Sterilised milk.

(b) MEAT AND OTHER FOODS.

There are nine licensed and five registered slaughterhouses in the Town but not all of these are in regular use, a good deal of the Town's meat supply being obtained by local meat purveyors from the City Meat Market. This abattoir meat is generally of poorer quality than the locally killed article, and it suffers in appearance as well as in general excellence and keeping quality from the amount of handling it receives, and from the fact that it is often removed from the hanging rooms and transported by road before rigor mortis is thoroughly complete. I look forward to the time when the Council will decide to erect its own central public abattoir and refrigerator, where facilities will be provided for butchers who wish to slaughter and dress their own animals and store the carcasses under ideal conditions until they are required.

All the slaughterhouses are visited regularly during the hours of slaughter and an effort is made to inspect every animal slaughtered for human food. The three hours' notice of intention to slaughter required by the Meat Regulations of 1924 makes this practicable. This requirement also enables us to examine all pigs killed for home consumption on private premises. The amount of "back yard pork" produced in the town is happily gradually declining, the number of visits in connection with killing on private premises being 113 this year as compared with 189 in the previous year. Visits to slaughterhouses were 790 as compared with 305 in 1929. Meat and Food shops have received 416 visits and markets 91 visits. A further 169 visits to premises have been paid for the express purpose of enforcement of the Meat Regulations, 1924.

The following is a summary of animals and carcasses examined during the year. The total of 2,549 is a marked increase on the figure for 1929 which was 1,424:—

TABLE 7.
NUMBER AND CLASSIFICATION OF ANIMALS AND CARCASSES EXAMINED.

			Before Slaughter.	During Slaughter.	After Slaughter.	Total.
Oxen	...	...	57	32	360	449
Cows	...	...	3	—	117	120
Calves	...	...	1	2	13	16
Sheep	...	...	434	87	715	1,236
Pigs	...	...	42	29	657	728
			537	150	1,862	2,549

TABLE 8.
LIST OF ANIMALS AND ARTICLES OF FOOD WHICH WERE FOUND TO BE DISEASED OR UNSOUND, AND WERE EITHER SEIZED OR SURRENDERED AND DESTROYED.

Twelve Beast's Livers—Abscesses	...	...	159 lbs.
Twenty-one Beast's Livers—Distoma Hepatica	...	...	280 "
Three Beast's Livers—Cirrhosis	...	...	40 "
One Beast's Liver—Hepatitis	...	...	18 "
One Beast's Liver—Fatty Degeneration	...	...	12 "
Three Beast's Livers—Distoma Hepatica and Hepatitis	...	...	36 "
Two Beast's Livers—Peritonitis	...	...	32 "
One Beast's Liver—Echinococcus	...	...	15 "
One Beast's Liver—Necrosis	...	...	14 "
One Beast's Liver—Tuberculosis	...	...	13 "
Three Beast's Lungs—Echinococci	...	...	29 "
One Beast's Lungs—Tuberculosis	...	...	20 "
One Beast's Lungs—Distoma Hepatica	...	...	6 "
One Beast's Lungs—Distoma Hepatica and Bronchitis	...	...	12 "
Four Beast's Heads—Tuberculosis	...	...	85 "
One Beast's Stomach—Inflammation	...	...	18 "
One Beast's Spleen—Inflammation	...	...	2 "
One Beast's Liver and Spleen—Distoma Hepatica...	...	...	7 "
One Beast's Liver, Lungs and Intestines— Tuberculosis	...	...	20 "
One Beast's Carcase and Offal—Tuberculosis	...	...	750 "
One Beast's Head and Intestines—Tuberculosis	...	...	40 "
One Short Side of Beef—Oedematous	...	...	346 "
One Portion of Beast's Pelvic Cavity—Tuberculosis	...	...	10 "
One Beast's Stomach, Intestines, Spleen, Liver, Lungs and part of trimmings—Tuberculosis	...	...	60 "
Sixteen Pig's Heads—Tuberculosis	...	...	237 "
One Pig's Head—Cystic	...	...	10 "
One Pig's Pluck—Pleurisy and Peritonitis	...	...	9 "
Three Pig's Plucks—Tuberculosis	...	...	27 "

One Pig's Stomach—Tuberculosis	...	...	...	2 lbs.
One Pig's Liver—Clondy Swelling	...	...	...	6 „
One Pig's Liver—Hepatitis	...	...	...	12 „
Two Pig's Livers—Tuberculosis	...	...	...	22 „
Three Pig's Livers—Cirrhosis	...	...	...	21 „
One Pig's Liver—Necrosis	...	...	...	4 „
Three Pig's Livers—Cirrhosis and Necrosis	...	...	...	12 „
One Pig's Lungs—Strongylus Paradoxus	...	...	...	4 „
Four Pig's Intestines—Tuberculosis	...	...	...	44 „
Twelve Pig's Kidneys—Hydronephrosis	...	...	...	2 „
One Pig's Pluck and Intestines—Tuberculosis	...	...	...	20 „
Two Pig's Heads and Intestines—Tuberculosis	...	...	...	100 „
One Pig's Head and Intestines—Tuberculosis	...	...	...	41 „
One Pig's Head and Intestines—Tuberculosis	...	...	...	41 „
One Pig's Stomach and Mesentery—Tuberculosis	...	...	...	10 „
One Pig's Carcase and Offal—Moribund	...	...	...	46 „
One Pig's Intestines and Kidney—Urethritis	...	...	...	7 „
One Pig's Head, Pluck and Intestines—Tuberculosis	...	...	...	12 „
Two Pig's Heads, one Pluck, Lungs, two Stomachs, two Intestines and two portions of Neck— Tuberculosis	...	...	...	70 „
Two Sheep's Carcases and Offals—Moribund	...	...	...	110 „
One Sheep's Liver—Abscesses	...	...	...	4 „
One Sheep's Forequarters—Pleurisy and Pneumonia	...	...	...	25 „
One Sheep's Pluck, Stomach and Intestines— Inflammation	...	...	...	20 „
One Sheep's Liver—Cirrhosis	...	...	...	3 „
Ten Boxes of Haddock Fillets—Unsound	...	...	...	70 „
120lbs. of Peas—Unsound	...	...	...	120 „
				<hr/>
				3,094 „
				<hr/>

(c) ADULTERATION, ETC.

FOOD AND DRUGS (ADULTERATION) ACT, 1928.

During the year 322 samples were purchased or procured and submitted to the Public Analyst as compared with 310 in the year 1929. This number is well above the Ministry of Agriculture's recommended scale, which is 3 samples per thousand of the population. The number of samples not genuine was 10, and two of these related to a discrepancy of weight in seidlitz powders. The percentage of adulteration was 3.1. In 1929 it was 3.56. In the last few years the percentage of adulteration has shown a steady decline, having fallen from 15 per cent. in 1924 to the present low figure. Notwithstanding this reduction I do not advocate any lessening of the scale on which samples are taken believing that the regular and systematic way in which the work is carried out has a deterrent effect.

Legal proceedings were only instituted in one case of alleged fat abstraction where the percentage of deficiency was 23.3. A conviction was secured and the defendant fined £2 and 10/- costs.

In the remaining instances of adulteration letters of warning were forwarded by the Town Clerk to the vendors of the samples.

TABLE 9

SUMMARY OF ARTICLES OF FOOD SUBMITTED TO THE PUBLIC ANALYST, AND THE RESULTS OF THE ANALYSES.

Article Analysed	Total Samples.	Genuine.	Not Genuine.
Milk	272	264	8
Condensed Milk	1	1	—
Cream	1	1	—
Machine-Skimmed Condensed Milk	1	1	—
Butter	1	1	—
Margarine	6	6	—
Genoa Cake	2	2	—
Cocoanut Cake	1	1	—
Cream Sandwich	1	1	—
Black Currant Jam	1	1	—
Damson Jam	1	1	—
Strawberry Jam	1	1	—
Lemon Cheese	1	1	—
Sugar	2	2	—
Lard	3	3	—
Cheese	2	2	—
Tea	2	2	—
Cocoa	1	1	—
Sausage	2	2	—
Flour	2	2	—
Corned Beef	1	1	—
Black Pudding	1	1	—
Polony	1	1	—
Salmon and Shrimp Paste	1	1	—
Beer	6	6	—
Mustard	1	1	—
Seidlitz Powder	2	2	2
Sauce	1	1	—
Red Pepper	1	1	—
Cream of Tartar	1	1	—
Arrowroot	1	1	—
Coffee and Chickory	1	1	—
	322	312	10

TABLE 10.

PROSECUTION UNDER THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

Date of Purchase	Sample No.	Deficiency.	Results.	Penalty.	Costs.
26/530	5596	23.3 per cent. Fat	Convicted	£2	10/-

The vendor of the above sample was prosecuted at the same time for selling Graded milk within the Borough without a license. He was convicted and 10/- costs were imposed,

TABLE 11.

PUBLIC HEALTH (PRESERVATIVES IN FOOD) REGULATIONS,
1927.

The following articles submitted to the Public Analyst were examined for the presence of preservatives. In every case the samples were found to be free from preservatives or thickening substances.

Article Examined.					Total Samples.
Milk	...	...	...	...	272
Condensed Milk	...	...	...	...	1
Cream	...	...	...	...	1
Machine-Skimmed Condensed Milk	...	...	...	...	1
Butter	...	...	...	...	1
Margarine	...	...	...	...	6
Genoa Cake	...	...	...	...	2
Cocoanut Cake	...	...	...	...	1
Cream Sandwich	...	...	...	...	1
Black Currant Jam	...	...	...	...	1
Damson Jam	...	...	...	...	1
Strawberry Jam	...	...	...	...	1
Lemon Cheese	...	...	...	...	1
Cheese	...	...	...	...	2
Sausage	...	...	...	...	2
Black Pudding	...	...	...	...	1
Polony	...	...	...	...	1
Salmon and Shrimp Paste	...	...	...	...	1
					<hr/> 297 <hr/>

(d) CHEMICAL AND BACTERIOLOGICAL EXAMINATION OF
FOOD.

The chemical analyses of food and drugs purchased under the Food and Drugs (Adulteration) Act, 1928, are carried out by Mr. Joseph Lones, F.I.C., F.C.S., Borough Analyst of 41, Vicarage Road Smethwick; he also carries out the examinations of samples of the town's water supply which are from time to time submitted to him. Mr. Lones also holds the appointment of Agricultural Analyst under the Fertilisers and Feeding Stuffs Act, 1926.

Bacteriological examinations are carried out by Professor Lewis and his staff at the University of Birmingham Public Health Laboratory, Great Charles Street, Birmingham. The materials submitted to him are for the most part samples of milk for examination for bacterial content and for the presence of tubercle bacilli. Occasionally a pathological specimen is submitted when a doubtful condition is encountered in a carcase slaughtered for human food. It has only been necessary to submit one such sample during the present year and the examination confirmed the diagnosis that the Inspector had already made.

FERTILISERS AND FEEDING STUFFS ACT, 1926.

Eleven samples were submitted to the Agricultural Analyst, nine of feeding stuffs and two fertilisers, all of which were returned genuine.

FACTORIES AND WORKSHOPS.

During the year 156 visits were paid to Factories, Workshops, etc., and 4 to Out workers' premises. Five notices were received from H.M. Inspector of Factories drawing attention to sanitary defects in Factories. In four cases special visits were paid, Notices served, and in three of the cases the defects remedied. The fifth case was with reference to means of exit in case of fire and was referred to the Watch Committee for attention.

1.—INSPECTION OF FACTORIES, WORKSHOPS & WORKPLACES.
INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR
INSPECTORS OF NUISANCES.

	Number of		
	Inspections, (1)	Written Notices. (2)	Prosecution (3)
FACTORIES (Including Factory Laundries)	49	—	—
WORKSHOPS (Including Workshop Laundries)	107	5	—
WORKPLACES (Other than Outworkers' premises)	—	—	—
TOTAL	156	5	—

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS
AND WORKPLACES.

Particulars. (1)	Number of Defects.			Number of Prosecutions (5)
	Found. (2)	Remedied (3)	Referred to H.M. Inspector (4)	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of cleanliness	4	3	—	—
Want of ventilation	1	1	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	—	—	—	—
Other nuisances	3	3	—	—
Sanitary accommodation {	insufficient unsuitable or	—	—	—
	defective	4	3	—
	not separate for sexes	1	1	—
<i>Offences under the Factory and Work- shop Acts :—</i>				
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—
Other offences (Excluding offences relating to outwork and offences under the Sections men- tioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921.)	—	—	—	—
TOTAL	13	11	—	—

*Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901,
as remediable under the Public Health Acts.

INSPECTION OF CANAL BOATS.

During the year 52 canal boats were inspected. Only two were found to contravene the Regulations, and in both instances the defect reported was neglect to re-paint the boats. Notices were served on the owners of the boats and certificates were received showing that the requirements had been complied with.

Causes of Death at Different Periods of Life in County Borough of Smethwick.
1930.

CAUSES OF DEATH.		Sex.	All Ages.	0—	1—	2—	5—	15—	25—	45—	65—	75—
ALL CAUSES												
1 Enteric fever		M	...	...	...	...	...	...	...	...	...	...
		F	...	...	...	...	...	...	...	...	...	...
2 Small-pox		M	...	...	...	...	...	...	...	...	...	...
		F	...	...	...	...	...	...	...	...	...	...
3 Measles		M	...	...	...	...	...	...	...	...	...	...
		F	2	...	...	1	1	...	...	...	...	...
4 Scarlet fever		M	1	...	...	...	1	...	...	...	...	...
		F	1	...	...	...	1	...	...	...	...	...
5 Whooping cough		M	...	...	...	...	...	...	...	...	...	...
		F	1	...	...	1	...	...	...	...	...	...
6 Diphtheria		M	9	...	2	3	3	...	1	...	...	...
		F	12	...	2	4	6	...	...	...	...	...
7 Influenza		M	6	...	...	...	...	1	...	3	1	1
		F	4	...	...	...	...	...	1	...	1	2
8 Encephalitis lethargica		M	...	...	...	...	...	...	...	...	...	...
		F	...	...	...	...	...	...	...	...	...	...
9 Meningococcal meningitis		M	...	...	...	...	...	...	...	...	...	...
		F	1	1	...	...	...	...	...	...	...	...
10 Tuberculosis of respiratory system		M	37	...	1	...	...	5	17	13	...	1
		F	20	...	...	...	...	5	8	7	...	...
11 Other tuberculous diseases		M	6	1	...	...	...	...	2	3	...	...
		F	4	...	1	1	1	1	...	...	...	...
12 Cancer, malignant disease		M	55	...	...	...	...	1	3	28	17	6
		F	54	...	...	...	...	...	9	23	11	11
13 Rheumatic fever		M	...	...	...	...	...	...	...	...	...	...
		F	...	...	...	...	...	...	...	...	...	...
14 Diabetes		M	5	...	...	...	...	...	...	2	2	1
		F	5	...	...	...	...	...	...	2	3	...
15 Cerebral hæmorrhage, etc.		M	30	...	...	...	...	...	1	8	10	11
		F	35	...	...	...	...	...	...	9	8	18
16 Heart disease		M	87	...	...	...	...	...	4	25	35	23
		F	92	...	...	...	3	...	8	16	30	35
17 Arterio-sclerosis		M	20	...	...	...	...	...	1	6	5	8
		F	11	...	...	...	...	...	1	...	4	6
18 Bronchitis		M	14	1	...	...	...	...	1	4	2	6
		F	17	2	1	...	...	...	...	2	4	8
19 Pneumonia (all forms)		M	46	8	...	2	...	2	4	26	3	1
		F	17	5	1	1	...	...	1	5	2	2
20 Other respiratory diseases		M	2	...	...	...	...	...	1	...	...	1
		F	4	...	1	...	...	...	...	1	1	1
21 Ulcer of stomach or duodenum		M	10	...	...	...	...	...	3	6	...	1
		F	2	...	...	...	...	...	...	2	...	...
22 Diarrhœa, etc.		M	5	3	1	...	...	...	...	...	...	1
		F	6	5	...	1	...	...	...	...	...	...
23 Appendicitis and typhlitis		M	2	...	1	...	1	1	...	...	...	...
		F	7	...	...	1	1	...	3	1	1	...
24 Cirrhosis of liver		M	2	...	...	...	...	...	1	1	...	...
		F	3	...	...	...	...	...	1	1	1	...
25 Acute and chronic nephritis		M	14	...	...	...	1	...	...	5	5	3
		F	13	...	...	...	...	...	3	6	3	1
26 Puerperal sepsis		M	...	...	...	...	...	...	...	...	...	...
		F	7	...	...	...	...	...	7	...	...	...
27 Other accidents and diseases of pregnancy and parturition		M	...	...	...	...	...	...	...	...	...	...
		F	...	...	...	...	...	...	...	...	...	...
28 Congenital debility and mal-formation, premature birth		M	44	44	...	...	...	...	...	...	...	...
		F	21	21	...	...	...	...	...	...	...	...
29 Suicide		M	5	...	...	...	...	...	2	2	1	...
		F	4	...	...	...	...	...	2	2	...	...
30 Other deaths from violence		M	20	1	...	1	2	5	5	4	...	2
		F	4	...	...	...	1	...	1	1	...	1
31 Other defined diseases		M	66	6	1	2	3	1	7	18	16	12
		F	56	4	1	...	...	...	13	13	10	15

